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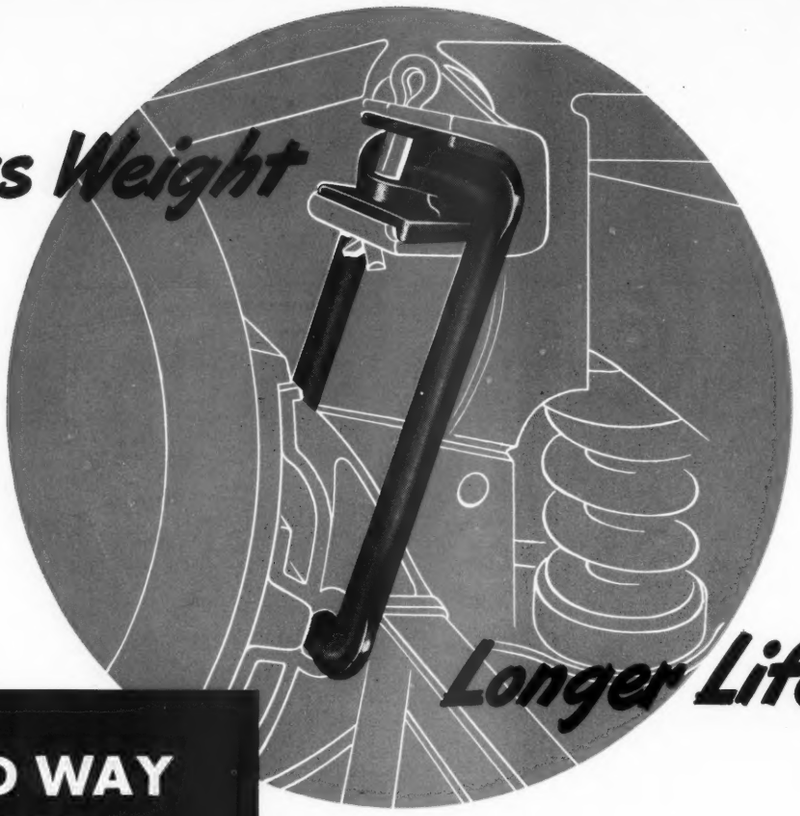

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An article by C. R. Knowles, retired superintendent of water service of the Illinois Central, describing the improvements in equipment and operation resulting from locomotive-boiler water treatment.

B & O Redecorates Colonial Diners ***830***

Simpler furniture and decorations have reduced maintenance without any sacrifice of attractiveness and capacity has been increased in these reconditioned cars, as set forth in this article.

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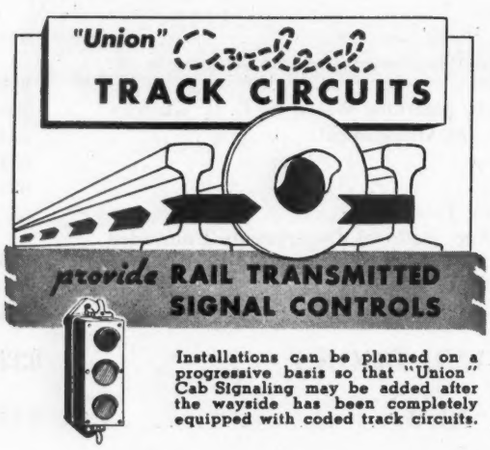

Installations can be planned on a progressive basis so that "Union" Cab Signaling may be added after the wayside has been completely equipped with coded track circuits.

"UNION" Coded Track Circuits have been used in practically all systems of railway signaling and through years of service have proved their reliability and safety of operation under all weather conditions. Their use permits the transmission of signal controls without line wires vulnerable to sleet, rain and wind. They have been employed to advantage for automatic block signaling on both single and multiple track. They have been used effectively with Remote Control and Centralized Traffic Control Systems. To date, they are in service on approximately 3,500 miles of track.

If your railroad has experienced prostration of your signaling systems during recent storms, why not prepare for the coming winters by installing the "Union" Coded Track Circuit Control System?

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RAILWAY AGE

Efficiency FOR VICTORY

The Arithmetic of Transportation Rivalry

If the parties to the argument over the relative government treatment of competing agencies of transportation do not agree to place all these agencies on a plane of substantially equal self-support, elementary arithmetic will eventually bring about such equality anyhow.

For years the railroads have drawn attention to the injury done to the public interest in continued economical railroad transportation because of their loss of traffic to competitors whose rates were artificially lower than some railroad rates—not owing to their "inherent" economy, but to assistance received from the taxpayers in providing their service. The railroads have maintained that the only solution consistent with the continuance of transportation as private business is removal of all tax aid to transportation. The answer of most of the favored transportation agencies has been preparation of post-war demands on the treasury far exceeding any ever previously made.

The private enterprise solution, advocated by the railroads, is not, however, the only alternative. In its recent transportation report, the National Resources Planning Board said, in effect, to the railroads: "You have been justly complaining for years that your competitors have facilities paid for at public expense while yours are supported only by charges on your customers. We propose to correct this inequality—not, however, by ending donations of tax money to your competitors, but by spending proportionate public funds on the railroads."

The ton-mile charges to users of railroad transportation in 1942 averaged 9.32 mills. A comparable up-to-date figure for truck transportation is not available, but was probably in the neighborhood of 40 mills. Similarly, for inland waterway common carriers the average charge, most likely, was in the neighborhood of 6 mills. The railroad charge, if the federal government provided the roadway gratis—as is done for the waterway lines and, in part, for motor carriers—could be reduced to less than the charge of 6 mills made by waterway common carriers.

Each of the agencies of transportation is important to the nation's welfare. Of these agencies, only the railroads combine a nation-wide, all-season, fast service at costs sufficiently economical to move basic commodities long distances. Railroad service, thus, is indispensable for a large proportion of the nation's commerce and it is politically impossible to drive these carriers out of business. If the railroads are pushed even near to that extremity by such unlimited subsidies from the treasury as other agencies of transportation are now planning, then federal aid will be forced on the railroads whether they desire it or not.

The railroads are not an "outmoded" means of transportation, which the nation can dispense with. These carriers cannot continue in economical peace-time operation under growing losses of traffic, caused solely by heavier and heavier gifts from the public treasury to their competitors. Opinion is at liberty to choose whether equal treatment in transportation shall be achieved by subsidizing the railroads or by abstaining from subsidizing their rivals—but opinion cannot decree the indefinite continuance, and increase, of present unequal treatment. Such a course contradicts the arithmetic of the situation and, in the long run, arithmetic does not yield to opinion.

Resourcefulness in Maintenance

The resourcefulness of maintenance of way forces in devising ways to "do the impossible" in times of stress has long been traditional. In blizzards, floods, wrecks and similar disasters their ingenuity and perseverance have stood the railways in good stead. This ability is being tested this year in ways and to a degree never approached.

First was the shortage of critical materials, which in many respects, notably rail, is threatening the safety of transportation, as evidenced by the rapid increase in the number of breakages under trains. While the reason for the diversion of steel from new rails is evident, it does not prevent the weakening of the track structure and the possibility that the free, orderly flow of traffic may be interrupted by sudden blockades due to derailments, which, if sufficiently numerous, may interfere with the movement of vital war materials.

Until materials for roadway maintenance can again be secured in the quantities necessary for adequate upkeep, railway maintenance forces have no alternative but to intensify their measures to detect and forestall failures. In pursuance of this policy a number of railways have reduced the interval between inspections by their rail detector cars, and at least one large railway is now operating these cars over portions of its main lines every 60 days, as compared with its previous practice of making annual inspections. Other roads are making what are admittedly temporary and uneconomic repairs to bridges and other structures to carry them over until the present emergency passes. Resourcefulness has been shown especially in gathering together unused and possibly even obsolete materials to meet the demands for new buildings. Especially outstanding has been the increasing utilization of timber for uses heretofore regarded as impractical, especially in long spans, which is made possible by the development and use of timber connectors.

Now a new crisis is developing that is crowding the problem of materials into the background by reason of its even greater severity. This is the critical and steadily growing scarcity of labor. By the demands of the armed forces, the lure of the higher wages of war plants, and more recently the emphasis on agricultural labor, railway maintenance forces, already inadequate to the demands of larger programs to make good the wear and tear of record traffic, are being drained to the point where many section gangs are reduced to the foreman; and he can do relatively little work other than patrol track.

Without the acute shortage of materials having been alleviated, the shortage of labor is today the No. 1 problem of maintenance of way forces. It calls for even greater ingenuity than that displayed in meeting the shortage of materials—to hold men who are still in service and to direct their activities into the most necessary channels, and especially to tap new sources of supply. Some roads are employing increasing numbers of women for tasks for which they have heretofore been considered unsuited. Others are sending scouts into areas remote from industrial centers. One road is attaining marked success in enrolling for week-end work men employed in offices, stores and schools on other days. Still another road has perfected an arrangement with the local courts to parole minor offenders to its gangs.

These changes are indicative of the wide scope of the measures that versatile maintenance officers are already employing, and of even more means which as the season advances they must employ to an increasing degree to meet conditions that are rapidly developing.

1943 Traffic Greatly Underestimated

The "official" forecast of railroad freight traffic for 1943 was—and still is—that tons carried one mile will run only about 10 per cent above 1942. Indications are, however, that *the actual increase in freight traffic this year is exceeding the estimate by not less than 150 per cent.*

As allocations of materials for the construction and maintenance of railroad rolling stock and other facilities have been made on the basis of the minimum with which they might squeeze by, it is obvious that the excess of actual traffic demands over the estimates may lead to serious consequences.

Definite statistics on freight ton-miles are not obtainable until about 2½ months after a month's close. The latest complete report now available is for January. Carloading figures are published each Thursday for the preceding week; but they now have little significance when compared with carloading figures for earlier periods, because the average load per car, and especially the average distance freight has to be hauled, have been rising so rapidly. By using current carloadings to estimate ton-miles, however, on the basis of the figures for the latest months for which both carloading and ton-mile figures are available, it is possible to arrive at a pretty accurate estimate of current ton-miles. The relationship between carloadings and revenue ton-miles during the twelve months of 1942, and estimates based upon it of the ton-mileage handled in the first three months of 1943, are shown in the accompanying table.

The most important factors, probably, in increasing the average ton-mile output per freight carload have been two mandatory orders issued by the Office of Defense Transportation during 1942—one, going into effect in May, prescribing minimum loads for l.c.l. cars, and the other, effective in November, prescribing minima for cars moving at carload rates. These two factors—plus the increasing length of haul per car—helped increase the revenue ton-mile output per carload by 39 per cent during 1942.

Revenue ton-miles in January, 1943, totaled 55 bil-

lions, an increase of 28 per cent over January, 1942. Average carloadings weekly in February and March were 763,910 and 768,356 respectively. Multiplying these two averages by the actual average of 77,946 ton-miles per car loaded in January this year produces an estimate of 53 billion ton-miles in February, a short month, and of almost 60 billion in March—making an estimated 168 billion ton-miles in the first quarter of 1943, or an increase over 1942 of 27 per cent.

Relationship Between Carloadings and Revenue Ton-Miles

1942	Avg. Weekly Carloadings	Rev. Ton-Miles (000)	Avg. Monthly Ton-Mi. per Weekly Carload	% Relationship of Ton-Mi. per Carload Jan. '42 = 100
Jan.	771,655	42,962,302	55,675	100
Feb.	780,693	40,810,773	52,275	94
Mar.	792,860	48,255,531	60,862	109
Apr.	837,760	49,997,495	59,680	107
May	834,143	54,270,231	65,061	117
June	846,442	53,852,328	63,621	114
July	830,392	56,956,174	68,589	123
Aug.	870,190	58,626,310	67,372	121
Sept.	875,915	58,155,496	66,394	119
Oct.	902,409	62,160,196	68,882	124
Nov.	809,013	56,958,793	70,405	126
Dec.	708,616	55,030,990	77,660	139
1943				
Jan.	706,170	55,120,900	77,946	140
Feb.	763,910	53,100,000*	.....	...
Mar.	768,356	60,000,000*	.....	...

* Estimated.

Railroad traffic, as measured in ton-miles, increased 28 per cent from March to October last year—as was observed in our last week's issue. Since car shortages have already appeared with traffic at its present level, it seems clear that even a much smaller seasonal increase this year may cause a troublesome situation.

The estimate of probable railroad traffic this year was based on government forecasts of goods to be produced and moved. Results indicate that these government estimates have erred dangerously on the conservative side; and that the authorities who allocate materials—by the chances they have taken in allowing the railroads quantities only barely sufficient to meet needs which now appear to have been gravely underestimated—threaten to present the nation with a transportation condition which would have very adverse effects on production.

Prospects of the railways being able to meet peak demands next fall are not good. Prospects that if the war continues they will be able to meet demands in 1944 are worse. Railway managements should be making much greater individual and concerted efforts to get more equipment and materials. They should place definite *orders now* for all they expect to need, and thus make sure that full responsibility will rest elsewhere if they do not get it.

Railroads—Originators of "Mass Production"

"When we talk, as we so often do nowadays, of this being the 'mass production age' (as well as the age of the 'masses' as Senor Ortega y Gasset has reminded us) most of us have a mental picture of a moving conveyor belt a mile or so long, at one end of which raw materials are loaded on it, and at the other end the finished product is picked off all ready for use. We began to hear about it when Mr. Ford's plant some thirty years ago began to spout a stream of Model T cars on the roads. Now it is planes from scores of plants, to say nothing of a lot of other things, and what we call 'small business' is becoming a problem. Recently this writer happened to look at a 'railroad report' (which he does but seldom nowadays) and it led him to ask himself whether the American railroads were not the pioneers in the *principle* of mass production, which seems to be the greatest product for the least expenditure of human labor.

"The 'report' was that of the Chesapeake & Ohio Railway for 1942. Now the 'report' of any other railroad would have told a similar story but would not have *suggested* the story as did the Chesapeake & Ohio; this for a reason which the reader will perhaps allow this writer to state even though it involves a personal reminiscence or two. Just about fifty years ago this scribe in the course of his labors on the Wall Street Journal was poking around in 'railroad figures' with about as much understanding of them as a ten-year-old boy would have of a cuneiform inscription. (Of his current 'exegeses' in the files of the aforementioned paper the less said the better.) Glancing over the 'traffic and operating statistics' of the C. & O. his eye was caught by an item entitled 'average revenue train-load—2,015 tons' and out of the long-dead past there arose a curious memory.

"Fifty years ago when the 'average train-load' of all the rail carriers was about 170 tons (at present it is verging on 900) there were but two railroads in the country which had an average trainload of 300 tons. One was the Chesapeake & Ohio and the other the Lake Shore. They stood out amid the general ruck like lighthouses. The Lake Shore in those days was a natural 'low-grade' line, as its name might imply. Its president, John Newell, was solicitous concerning his grades because they enabled him to use relatively light (and cheap) motive power in getting his cars across the track. C. & O. had lots of heavy grades, but it had then, as now, a great preponderance of coal in its traffic which could be moved in volume at any time. This writer's memory does not reveal the maximum size of coal car used by C. & O. in those days. But he seems to remember that the '30-ton box car' was the aristocrat in the car field and the 80-lb. rail in the track field. . . .

"Maybe the analogy of the railroad is not precisely close to industrial mass production, but it assuredly does set up a similar line of thinking. One thing at least is clear—namely, that freight is moved by rail today with far less expenditure of human labor than it was fifty years ago, and that is the goal of mass-production.

"As all students of railroad history know, the 'conscious' striving for heavy revenue load started in the late nineties as a result of Mr. James J. Hill's efforts. . . . The present writer asked Mr. Hill how he had discovered the secret and remembers to this day his answer: 'It was that or go broke. You sell ton-miles and you spend train-miles. The more you sell for the less you spend the more money you make.' Years afterwards the late Mr. Loree introduced the scribe to a paper written about a hundred years ago by the then famous 'Dinny' Lardner of Trinity College, Dublin (Professor Dionysius Lardner), in which, studying the then mewling infant railroad industry, the Irish scientist had laid down the 'train load principle' in perfectly clear terms! . . .

"Query: Suppose that in the nineties this country like many others, Prussia, for instance, had left its railroads to government hands, would we have what we have today? Why not? All it would have needed is Mr. Hill and the other railroad men of the time who followed his lead working for the government instead of for their companies. But can one imagine 'public opinion' allowing them to do so?"

—*Thomas F. Woodlock in the Wall Street Journal*

Sign-Boards Were Used to Carry the Message to the Public

S. P. Spends $73,728 to Discourage Travel

Utilizes publicity and other means to hold holiday traffic to capacity of equipment

AN UNIQUE plan of advertising, entailing the expenditure of $73,728, to enlist public help in shaping passenger travel to conform to the capacity of available equipment and the priority of war traffic has been employed by the Southern Pacific to overcome a difficult travel problem created by the war. The enlistment of public aid was sought in order to curtail travel and to make possible the operation of a reservation system without which passenger service could not have been performed satisfactorily.

The system for handling the large amount of traffic created by public travel and that to and from the many training centers, camps and naval bases in its territory was worked out by the S. P. and Army and Navy officers. In order that the Army and Navy as well as other railroads might know how an unusual travel situation was controlled, the story is told in a brochure that has been prepared and is being distributed by the S. P.

Early in 1942, the S. P. discontinued all efforts to stimulate travel, because of the heavy volume of business travel plus the mounting tide of military traffic that it was then handling. As the demand for locomotives to haul war freight and the amount of equipment needed for the transportation of troops increased, the facilities available for civilian travel became less and less.

To cope with this situation, the railroad resorted to advertising to urge the public to travel in mid-week, to make reservations early and to cancel promptly if travel plans were changed. The advertising frankly admitted that trains were running late, that they were crowded and that dining cars were congested. As a special appeal, it was suggested to the public that "Bonds bought now would buy fine trips after the war." To emphasize the seriousness of the situation, the S. P. slogan, "Next Time Try the Train," which was being carried on highway billboards, was crossed out with red lines and a wartime message substituted below.

Asks Public Not to Travel

Up to the fall of 1942, the S. P. had been able to handle civilian travel without difficulty but it was anticipated that gasoline rationing, then on the horizon, would have a severe impact on railroad passenger service. The probability of a very large volume of holiday travel in December by men in the armed forces was also expected. In December, 1941, arrangements had been made to provide service for furloughed men by means of special trains, but due to Pearl Harbor and the declaration of war, this holiday travel by service men did not develop, most furloughs being cancelled in the territory served by the S. P. Without any definite information, therefore, as to the amount of increased travel by rail which

If you have a
HOLIDAY FURLOUGH
Dec. 15 to
Jan. 5
★ All coach seats will be reserved. You must make your coach reservations in advance.
★ Reservations will be made only after tickets are bought.
★ Reservations must be made and tickets bought at least 48 hours in advance of departure.
★ Get your tickets and reservations at
★ If you start a furlough trip before December 15th and will be returning before January 5th, be sure to make your return reservation well in advance of your return trip to camp.
We're having a tough time handling war traffic, but we are going to do everything we can to take care of men in uniform during the season of heavy holiday travel. Your requirements come first with us.
Meanwhile we are running advertisements to discourage civilians from traveling during the holidays, so that more accommodations will be available for you men.
The Southern Pacific representative at your camp will be glad to take care of your transportation requirements.
S·P
The Friendly Southern Pacific

Men in Service Were Asked to Make Reservations

might be caused by furlough travel, and also that resulting from gasoline rationing, it was evident to S. P. passenger officers that the handling of passenger travel in December would create a difficult problem.

So, starting in October a series of ads was run, calling public attention to the problem of the railroad. The ads said, in effect: "We ask you not to travel unless you feel you have good sound reasons for doing so."

Sets Up System Requiring Reservations

As a result of further information obtained from military authorities in November concerning the furlough movement in December, S. P. passenger officers decided that, in view of the rapidly mounting wartime load, still more drastic steps should be taken both to discourage travel and to obtain greater control of the traffic presented. Except in isolated instances, it was impossible to secure a close estimate of the amount of furlough travel that would come to S. P. rails, but it was known that the various camps had authority to furlough 10 per cent of the men and it was evident that the volume of this traffic would be very large.

It was decided, therefore, to set up a system requiring reservations for virtually all coach travel on Pacific lines for the period from December 15 to January 5. In taking this action, the road extended a practice that previously had required reservations for coach travel on the San Joaquin and Coast "Daylights" (streamliners), the southbound "Beaver" from Portland, Ore., and the "City of San Francisco" (streamliner).

Under the holiday program, coach seats were reserved in other S. P. trains by car number only, but this involved the numbering of all cars, the providing of reservation sheets for all offices, the allotment of blocks of space to various offices over its Pacific lines, and the establishment of a central control office. Reservation of coach space by telephone was discontinued for this period, and no reservations were made unless tickets were bought.

When the S. P. was working out its reservation arrangement and informed the other Western railroads of its plans, some of them questioned the advisability of the move because of the great amount of detail involved, the increase in the amount of work for hard pressed traffic forces, and the possibilities that the system might be too cumbersome for the smooth handling of traffic. Because of the many camps along its lines and the very large amount of soldier traffic to be expected, and because the S. P.'s war load was so great that it was necessary to avoid running extra trains for the service men, the S. P. decided, however, to go ahead with the plan, despite the difficulties involved.

Space Set Aside for Military Personnel

In addition to setting up this system of coach reservations, involving a tremendous amount of detail, it was also decided to arbitrarily set aside a large amount of both coach and Pullman space for military personnel on all principal trains during the period of December 15 to January 5. The space set aside for the military was subject to constant adjustment and when not fully used was made available to the public.

Since the low furlough fares arranged for service men were for coach travel, the bulk of the furloughed men traveled in coaches, although a liberal amount of space was also set aside for them in Pullmans. As the travel movement developed it was found that more Pullman space was set aside than was required and the proportions were reduced, releasing more Pullman space to the public. Conversely the amount of coach space set aside was increased.

The final result was that about 75 per cent of the

We hope we won't have to hang out this sign

With gasoline rationing almost here, and many of you, perhaps, planning to travel by train instead of by automobile, we'd like to give you a frank picture of the present situation on our railroad.

First, we have only so many cars, and construction of new passenger cars is prohibited.

That's point Number One.

Second, the armed forces have first call on every car and locomotive we own. We will take care of them FIRST—make no mistake about that. You, too, want it that way!

Third, America's war production is increasing by leaps and bounds, which means more and more war material for the railroads to handle. Since passenger trains and war freights must use the same tracks, it is becoming increasingly difficult to operate all trains efficiently. We have had to take off some passenger trains to clear the tracks for war freight and to release locomotives for other war work.

Fourth, though we are carrying an unprecedented number of passengers, so far we have been able to meet nearly all requests for seats and Pullman space. We have had to turn some people away and there have been a few cases where people had to stand in the aisles on short trips. But by and large, we have taken care of both military and civilian travel without serious difficulty.

However, if gasoline rationing causes many more people to travel by train, we may have to hang out the "Standing Room Only" sign.

We ask you not to travel unless you feel you have good, sound reasons for doing so.

You must be the judge of whether your trip is necessary or not.

If we all cooperate, it will help avoid any necessity of rationing train travel.

One $18.75 War Bond will buy seven steel helmets.

S·P

The War Bonds you buy now will come in handy when your children go to college.

The Friendly Southern Pacific

805

The First Advertisement Called Attention to the Travel Situation and Warned Against Rationing

coach space and about 20 per cent of the Pullman space was used by service men, their families and governmental agencies. The same groups used about 30 per cent of the tourist car space on the "San Francisco Challenger," "The Californian," "The Owl" and "The Coaster."

In a circular sent to employees, it was emphasized that the policy of the S. P. is that "The Army Comes First" and in order to carry out this policy, specific instructions were issued, among which were the following: no reservations will be made by telephone and none will be made unless a railroad ticket is purchased; space in each car for the number of passengers it will hold rather than individual seats will be reserved; passengers should be routed so as to avoid all circuitous routes; passenger agents will be stationed at large camps to reserve space for furloughed members of the military forces; and reservations for pass holders are not to be made unless the trip is in performance of duties, is for furloughed employees in military or naval service in uniform traveling to or from their homes, is because of illness or death, is to enable dependents of furloughed employees in military service to visit them at military posts; is for students traveling between their homes and schools.

THANK YOU!

The people who live in the cities, towns and villages along Southern Pacific's lines in the West have just provided a fine example of war-time cooperation.

We think this cooperation deserves recognition and we want to say "thank you" . . . since Southern Pacific was primarily concerned. And we're quite sure the many thousands of men in uniform who benefitted too, would also like to join us in this expression of appreciation.

Early in December we were faced with the problem of providing transportation during the holidays for a very large number of men in the armed services who were to be given holiday furloughs. Because of the pressure of war traffic on our equipment . . . cars and locomotives . . . we knew that we could not provide transportation for all these service men and the normal number of civilian holiday travelers too.

So we arranged a somewhat drastic and extensive program requiring coach reservations for virtually all trains, and set aside a major portion of both Pullman and coach space for the service men. Then we ran advertising telling people what our problem was, and why we could not take care of everyone who would like to travel during the holidays. We asked people *not* to "Try the Train"

As a result many people gave up holiday trips they very much wanted to make. The amount of civilian travel, compared with December, 1941, was considerably reduced and we took care of the service men in good shape. There was comparatively little congestion, and all essential travel was accommodated.

So we know that people generally have cooperated . and we give you all a hearty "thank you."

We hope you will continue to confine your trips, in 1943, to essential travel.

May we also express our appreciation at this time for your consideration and understanding attitude towards Southern Pacific and its service during the last twelve months? Because of the many trains on our tracks . . . carrying troops, equipment, war freight, vital materials and food . . . and the decreased amount of equipment for passenger use, our passenger service has been below peace-time standards. Trains have been crowded, and trains have been late. Because of the pressure for equipment, we have had to use many old cars, and we haven't been able to clean and refurbish equipment as well as we would like. We cannot obtain additional dining cars, and the conditions surrounding dining car operation these days are extremely difficult.

We have tried to give you the facts about our problems and difficulties, at the same time trying to do the very best transportation job we could under the circumstances. You in turn have responded in a way that has been most encouraging to us. You have shown a friendliness under war-time travel conditions that is heart-warming to us railroaders.

A. T. MERCIER, *President*

S·P

The Friendly Southern Pacific

The Last Advertisement Thanked the Public for Its Cooperation

"Don't Try the Train"

Having set up the system of coach reservations, the public was then informed of the arrangements through widespread advertising. Large ads were carried in every daily and weekly newspaper in Pacific Lines territory. The advertising was explanatory, and was friendly in tone, but bluntly said, "Don't Try the Train Between December 15 and January 5."

A one-minute talk urging the public not to travel during the holiday season and telling of the restrictive arrangements for handling coach travel was made over the air by F. S. McGinnis, vice-president, system passenger traffic. The talk, a recording, was heard over 26 radio stations. It was repeated a number of times over each station during a period of one week for a total of 347 radio announcements.

Advertisements were also run in army camp newspapers telling the boys in the service of the arrangements made to take care of their holiday trips, but informing them of the necessity of making coach reservations in advance. Restrictions as to reservations by furloughed men were later modified to prevent any hardship. Handbills carrying the same message were distributed at the camps. S. P. representatives were stationed at many camps to handle reservations and sell the tickets. Posters were placed at all stations and follow-up ads were run later in December as reminders.

Close Supervision Brings Results

Close supervision and constant adjustment of reserved coach space proved to be the keys to the successful operation of this holiday travel plan. When it was first put into effect, blocks of space were assigned to key offices all over the system and smaller amounts were assigned to some of the other stations, with arrangements for still smaller stations to obtain the coach space for patrons through nearby larger stations or offices. Constant check was then made of various stations and offices by the central control office and the general passenger and district agencies, and when one office was found at any time to have available space while another office needed more, space was transferred accordingly.

Reservations were made on the basis of 50 seats per car. Since most coaches had 60 or more seats, this provided a cushion for intermediate business and for people showing up at the stations at the last minute without reservations. In addition, it was arranged to have at least a half car of vacant space on every train to take care of last minute sales and intermediate business not reserved in advance. At all important terminals, coaches were carefully checked for surplus seats when the equipment was switched into the stations, and the information was given the men at the ticket wickets so that latecomers could be taken care of. Twenty-seven men from S. P. general agencies in the East were brought west to assist in handling the increased amount of work in offices and at camps. As a result of careful planning, close supervision, the co-operative attitude of agencies all over the system and the response of the public in voluntarily cutting down holiday pleasure travel, the holiday civilian

and furlough traffic was handled successfully. There were only isolated instances of people standing in trains, there were no instances where either soldiers or civilians were not taken care of and only a few times were civilians unable to get the exact train desired.

With 75 per cent of the coach space and 20 per cent of Pullman space used by service men, their families and governmental agencies, it is evident that considerably fewer civilian passengers were carried than in the same period of 1941-1942. And since the civilians were provided transportation, it is clear that the public generally gave up trips that otherwise would have been made.

There was some congestion in ticket offices when the plan was first announced, due to people hurrying to offices to get their reservations and tickets for trips they intended to make during the 22-day period. But after that the flow of people through the ticket offices leveled off and even fell below normal. The requirement that reservations must be made at ticket offices rather than by telephone increased the number of people coming to ticket offices but helped to relieve the congestion on telephone lines.

The S. P. had appealed to the public in strong and direct fashion to refrain from travel during the holiday period and because it had responded, the railroad felt that the public deserved commendation and as a consequence it published a large advertisement after the holiday rush was over, giving the public a hearty "Thank You."

The total cost of the advertising campaign was $73,728. This included $24,847 for preliminary advertising in October and November to discourage travel; $25,222 for running the advertisement, "Don't Try the Train," in newspapers in December; $6,088 for one minute radio talks in December; $571 for posters, dodgers and signs; and $17,000 for an advertisement thanking the public.

American Railroaders and Equipment in Iran

By Colonel J. A. Appleton, T. C.*

ON MARCH 30, the first all-American train carrying war supplies to Russia steamed into the capital of Iran after a 650-mile journey from the Persian Gulf. Those supplies had been landed by Americans from American ships lying at American-built docks. They had been loaded onto American freight cars hitched to American locomotives; and the train, thus made up, was operated to Teheran by American crews.

A large share of the credit for this tremendous achievement belongs to the men in America who are turning out locomotives and rolling stock. I've just returned from Iran where I've seen the equipment doing the job it was designed for.

Our principal mission in Iran is to deliver Lend-Lease supplies to the Russians in Teheran, 6000 tons of it to be moved by rail daily. Of course, that is not all the Lend-Lease equipment the Russians are getting, but it is a mighty important part. At Teheran, the Red Army takes over and moves the stuff north and westward to the Russian battlefront. Six thousand tons daily adds up to the staggering total of well over 2,000,000 tons per year. We haven't attained that goal yet, but we're spurting towards it.

During my own brief stay in Persia last January, the tonnage of our shipments north over the Trans-Iranian Railway was more than doubled.

Before we could move those supplies in such volume, we needed new locomotives and rolling stock. Thanks to equipment people in the U. S., that equipment has been coming through on schedule, and we have every confidence it will continue to do so. To date, more than 150 American locomotives have joined the battle of transportation in Iran. Upwards of 3000 of our flat cars, tank cars, box cars, and gondolas are rolling through Persia behind them. Even the cabooses which form the rear guard, were built in America. When I left Persia last January, American and Iranian crews were setting up one locomotive and 30 cars daily in the machine-shops and assembly sheds.

I have seen American 1000-hp. Diesel-electrics and 2-8-2 freight locomotives pushing north across the desert above the Persian Gulf. I have seen them traveling the 6,000 ft. hills of Luristan and the Elburz Mountains, higher still. Specially designed cars are now riding the rails through bitter mountain cold and scorching desert temperatures which hit 130 deg. Fahrenheit in the shade. They're taking every kind of punishment imaginable—and they're holding up splendidly.

My trip was from north to south, and we left Teheran at eight o'clock one morning in a driving snow storm. A private car had been put at our disposal, but it wasn't like any private car I'd ever seen before. This was a four-wheel boxcar which had long ago seen its best days in India. Two holes had been cut, for windows, in the back of it. There was no glass in those windows, and there was no heat in that car. With blankets, rations, and a kerosene stove which we had brought along ourselves, we tried to keep comfortable.

One of our 2-8-2's pulled us along. As you may know, the 2-8-2, once known as 'The Mikado', is now called 'The MacArthur.' For crew, we had an oddly assorted group. About half, I should say, were American soldiers of an Operating Battalion of the Military Railway Service, Transportation Corps, Army Service Forces. The rest of our crew were Persians—good railroad men themselves. We had a Persian engineer, an American fireman, an American conductor, a Persian brakeman, and an American flagman. One of the most bizarre sights I have ever seen was that of our American sergeant-conductor trying to make himself understood by the bearded Persian engineer.

All in all, however, the Iranians have proved industrious workers, fine machinists, and excellent railroaders. With their help, we are setting up more and more railroad equipment daily and rolling it along, with full cargoes, to the Russian army.

The trip I took was a long one. It took me a distance equivalent to more than one-and-a-half times 'round the world. During it, I saw our railroad equipment at work in Egypt, India, North Africa and England. At other times, I have seen more of it in Alaska. In America itself, I have watched our locomotives and rolling stock provide the veins and arteries which carry the life blood of American war production to the fighting men who will use it overseas. But nowhere have I seen more inspiring results of the skill and workmanship of the American equipment people than in the transportation equipment which is today moving goods northward across Iran, half-way 'round the world from the factories where it was produced.

* Colonel Appleton is Chief, Railroad Division, Transportation Corps. He was formerly general manager of the New York Zone, P. R. R.

Save Critical Materials by Softening Water

Removal of scale-forming solids makes unprecedented locomotive performance possible and enables railways to handle record-breaking traffic without delays

By C. R. Knowles

Retired Superintendent of Water Service, Illinois Central

Softened Water for Efficient Locomotive Operation

Probably no other single factor has contributed more to the unprecedented performance of the railways during the last year than the treatment of locomotive-boiler water. It is not debatable that the record breaking movement of traffic which is being handled would be impossible if engine failures traceable to the use of hard water were as frequent as they were only a few years ago. In this article Mr. Knowles, retired superintendent of water service of the Illinois Central, shows how and why a surprisingly large amount of critical materials can also be saved through the systematic improvement of locomotive water supplies.

WHILE the end is not yet in sight, the outstanding achievements of the American railroads in the war effort are already matters of record. Improvements in equipment and more efficient operation and maintenance have produced results far greater than in the last war. The remarkable record they established in meeting the demands of 1942 exceeded the most optimistic expectations; yet they are now going on to even larger performance.

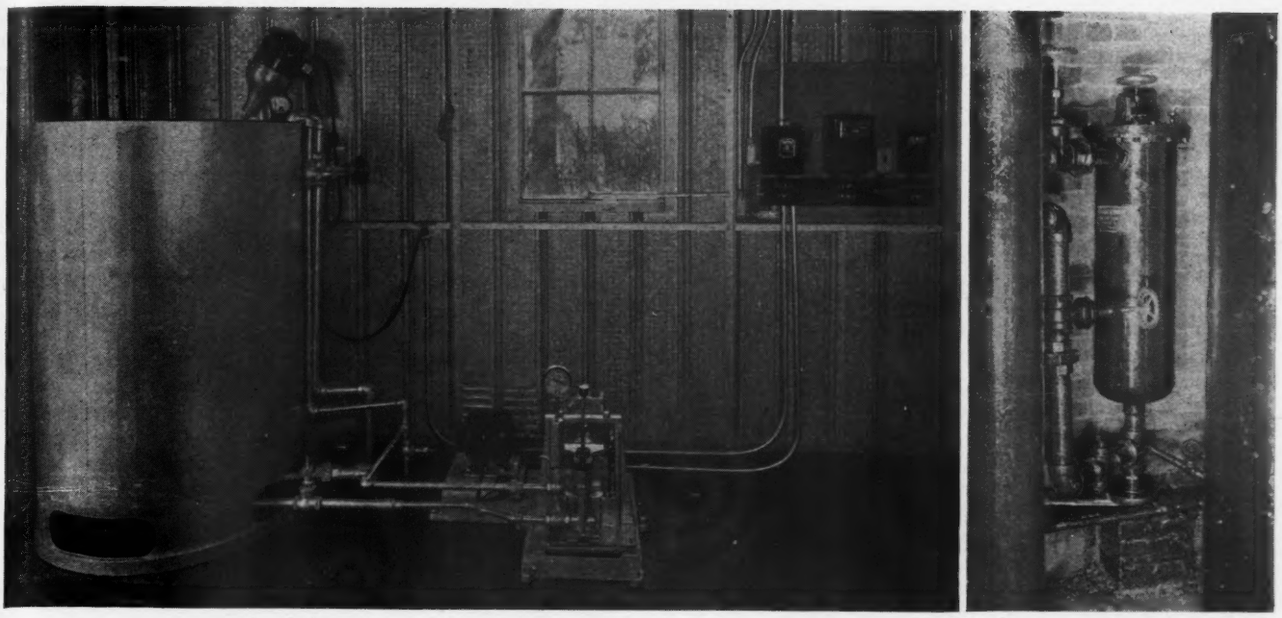
Greater utilization of locomotives has been one of the most important factors in increasing the general effectiveness of the railroads in the contribution they are making to the conduct of the war. With only two-thirds as many locomotives as they had during the last war, the railroads are handling currently 55 per cent more freight than they did then. While many locomotives have been completely redesigned and rebuilt to do more and better work, the treatment of the water used by these locomotives has been a vital factor in increasing their efficiency to the high level they now maintain.

In many instances, freight locomotives now run more than 500 miles, without change, as compared to 100 and 125 miles in previous years, and passenger-locomotive runs have been increased correspondingly. Proper treatment of water supplies has been chiefly instrumental in making these increased locomotive runs possible.

Improvement in the quality of the water provided for locomotive use has been responsible for the fact that the periods between the washing of boilers has been extended, in many instances, from every round trip to the full 30 days allowed by the federal law, and practically all water changes have been eliminated, except for repairs. While the full 30-day period between boiler washouts is not universal, it will apply to all locomotives in territory where the water is treated properly and a comprehensive system of blowing down the boilers is followed. In addition to increasing the availability of locomotives for service by reducing the time out for washing, these extended washout periods have also greatly reduced the number of broken stay bolts and cracked sheets, by eliminating much of the expansion and contraction which result from more frequent cooling down of boilers for washouts and water changes. This has reduced further the time that locomotives are out of service for repairs, in addition to the time saved by reason of less frequent boiler washing. Furthermore, less actual time is required for washing where treated water is used, as any mud or sludge present is in a soft flocculent form and is washed out more easily and quickly than where it is caked on the surface, as occurs with untreated water. A very marked reduction in labor is also made possible with extended washout periods, often amounting to as much as 50 to 75 per cent in washout crews, thus releasing labor for other essential work.

Engine failures caused by water conditions have been practically eliminated in treated-water territory. One road now shows an average interval between engine failures because of boiler defects that are traceable to bad water, of 10,000,000 miles where the water is completely treated, compared with a failure for an average of every 5,000 locomotive miles before treatment.

A bulletin of the United States Fuel Administration,



LEFT—An Internal Treatment Plant in a Fabricated Steel Building—RIGHT—A Ball-Feed Plant for Internal Treatment

in 1919, gave the annual loss of coal resulting from the use of hard water in locomotives as 16,000,000 tons. If only half of this amount is now being saved through the extension of water treatment since 1919, more than 150,000 tank and coal cars are being made available annually for handling war and other materials.

It is difficult, if not impossible, to present figures showing the actual savings in all materials which enter into the construction of locomotive boilers, that are accomplished through water treatment. They are important, however, as most, if not all, of the materials used in the construction and maintenance of locomotive boilers have been classified as "vital materials" by the War Production Board. Some idea of the amount of material required for boiler repairs may be gained from records and reports published in the proceedings of the Master Boiler Makers' Association for 1940 and 1941.

In the 1941 proceedings of this association, there is a summary of certain items involved in the construction of locomotive boilers that are affected directly by the treatment of boiler waters. This summary is compiled from the annual reports of the chief inspector of the bureau of locomotive inspection, Interstate Commerce Commission. The tabulation compares the number of items reported defective by the district federal inspectors for the two ten-year periods 1921-1930 and 1931-1940, these two periods being selected because of the marked advance in and extension of water treatment during the latter period. Although 12 per cent more locomotives were inspected during the second period, there were reductions in defects reported varying from 64 to 87 per cent. This summary follows:

Number of Defects Reported

	1921-1930	1931-1940	Per cent reduction
Arch tubes	1,820	659	64
Boiler shell	14,556	3,313	77
Crown bolts	2,966	664	78
Firebox sheets	10,822	2,860	73
Flues	5,488	1,707	69
Mud ring	13,244	2,377	82
Staybotls	7,279	2,392	67
Staybolts broken	38,149	4,796	87
Washout plugs	26,299	6,395	76

Appearance of a Locomotive Boiler After Five Years Operation Under Internal Treatment

Figures from the same source show that during the period 1931-1940, 9,209 flue extensions were granted, compared to 1,553 during the period 1921-1930, an increase of almost 600 per cent. The time between the resetting of flues has been increased from an average of 15 to 20 months to the full government limit of four years in most cases, with further extension to five and sometimes a second extension to six years. The ultimate life of flues with properly treated water is estimated by this association to be from 12 to 15 years, compared to a life of 2 to 5 years when using untreated water.

This association also reports in its 1940 proceedings that the life of locomotive fireboxes has been increased from an average period of 5 to 10 years, when using untreated water, to from 20 years to the full life of the locomotive with properly-treated water.

There were a total of 37,046 serviceable steam locomotives on the Class I railroads of the United States on December 1, 1942. About half of these locomotives were receiving treated water. From this figure it is apparent, therefore, that water treatment is saving annually thou-

sands of tons of critical materials that are badly needed for war purposes, and that the extension of treatment, where needed, will release still greater amounts of materials required in the conduct of the war.

Water treatment again plays an important part in the ability of the railroads to handle an increase of more than 50 per cent in ton miles with only two-thirds as many locomotives, compared with World War I. Certainly, without properly treated water, a great many more locomotives would be required than are now in service if indeed some of the modern locomotives with higher steam pressures could be operated successfully at all if they were compelled to use untreated water.

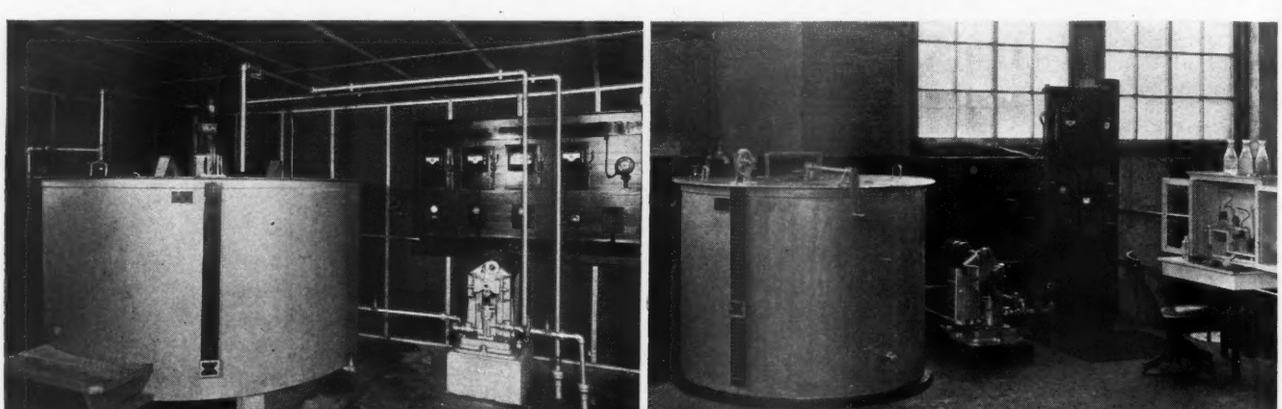
During the last quarter century the railways have been recognizing more and more the value of water treatment. Whereas formerly only the worst waters on a district were treated, partly as a result of this growing recognition and partly because modern demands for faster service and more dependable schedules have added their influence, during recent years treatment has been extended to the water from many supplies that previously were considered satisfactory without treatment. Despite this relatively wide extension of water softening in recent years, there still remain many sources of supply, the water from which can be treated to advantage.

In the early days of water treatment, the lime-soda ash method of softening water was employed generally and with excellent results, despite the crude and somewhat inaccurate equipment that was then available for proportioning the chemicals, and this process is still used more widely than any other. However, the last 10 or 12 years have witnessed remarkable developments in the treatment of water for locomotive boilers. In fact, during this period, the art of softening water for use in boilers has probably made greater advances than in all of the years previous. This is true particularly of the process that is generally referred to as internal treatment.

Many of the waters that are still used without treatment may be called border-line cases; that is, while they contain scale-forming solids, the hardness is low compared with the water from other sources. The fact that the cost for plants for the external treatment of these waters runs into considerable money often causes managing officers to hesitate to authorize the expenditure, particularly when they consider that, in many cases, the hardness of the raw water is less than that of most of the treated waters only a few years ago. Yet the ill effects of continuing to use these waters without treatment differ only in degree from those that were experienced from the use of the harder waters before they were softened.

Internal treatment differs from lime-soda ash and other processes for external treatment in that the chemicals are added to the raw water as it is delivered to the roadside tank or directly to the locomotive tender, instead of removing the greater part of the objectionable impurities from the water before it is pumped to the roadside tank or tender. Little, if any, chemical reaction takes place in the water treated by the internal method until it enters the boiler; thus the precipitates are formed within the boiler. When the proper combination of chemicals is used, the precipitates are in the form of a soft non-adherent flocculent sludge which may be disposed of readily by blowing it out of the boiler.

In former years, the chemicals used in internal treatment were applied by the hand or bucket method, or by means of crude and somewhat inaccurate devices similar in principle to the present-day by-pass type of feeder. The results were quite uncertain with these methods of application. Supervision was lax and the amount of treatment applied was measured very largely by the ability of the locomotive to carry the water without foaming. It was common practice to reduce the treatment when boilers showed indication of foaming, instead of maintaining adequate treatment and controlling the foaming salts by the use of the blow-off cocks. It is only within the last few years that blow-down schedules have been established that keep the dissolved solids low enough to permit the application of an adequate amount of treatment to the boiler without experiencing trouble from foaming.



LEFT—An Electrically-Controlled Wayside Proportioning Plant for Feeding Internal Treatment Chemicals—RIGHT—An Internal Treatment Plant Installed in a Locomotive Terminal Power House

Blowing Down Important in Internal Treatment

Full realization of the importance and effect of proper blowing down on boiler-water conditions has contributed materially to the success of water treatment. While this applies to all forms of water treatment, it is especially applicable to internal treatment, as the precipitated solids must be blown from the boiler instead of being settled out in the treating tank before the water enters the boiler, as is done with the lime-soda ash process. This does not necessarily mean excessive blowing down, as the blowing required to maintain the desired concentration of dissolved solids with any form of treatment is usually sufficient to remove the sludge formed when the chemical reactions take place within the boiler.

Anti-foam or stabilizer treatment is often used in com-

bination with other treatment where the foaming salts are high or difficult to control, as the stabilizer treatment permits carrying much higher dissolved solids without foaming. Inauguration of comprehensive blow-down schedules, as determined by systematic tests of boiler-water samples, has made it possible to apply and maintain sufficient chemicals in the water to produce the desired results, and should be a part of any program of boiler-water treatment.

The modern method of applying internal treatment is by means of what is commonly termed a wayside treating plant. The mechanical application of chemicals requires dependable proportioning equipment, designed to meet the requirements of the water. This equipment must be accurate in the delivery of chemicals, but at the same time, it is comparatively simple in both construction and operation. It requires little attention in either maintenance or operation. However, this type of plant should be given the same supervision with respect to chemical dosage and examination of treated water samples as any other type of treating plant.

Factors Favoring Wayside Treating Plants

Two important facts to be considered in the connection are that the initial cost of a wayside treating plant is far less than that of a lime-soda or zeolite plant and, if designed and operated correctly, it will give equally good results with most railway water supplies. Exceptionally hard water should be treated by the lime-soda ash process. The cost of internal treatment is usually no greater, where the comparative cost is given proper consideration. As a rule, the cost of maintenance and operation is much lower. What is of even greater importance under present war conditions, however, is the fact that it requires the minimum of critical materials to build such a plant and it should save annually several times the quantity of critical materials required for its construction.

The amount of material necessary to build a plant of this type is only a fraction of that required in an external treating plant. The floor space required is small; thus it needs little housing. Often it may be installed in existing buildings, thereby eliminating the necessity for a separate building, or a retired car body may be used for housing the plant. One railroad uses retired refrigerator car bodies almost exclusively for such installations.

An internal or wayside water-treating plant is more flexible than almost any other type of treating plant because it is not restricted to the treatment of any specified amount of water within a given period of time. For example, a plant of this type designed to treat a water containing 4 grains of non-carbonate or sulphate hardness will require approximately 500 gal. of chemical solution for each 100,000 gal. of water treated. If 200,000 gal. of water are required daily, the chemical vat or tank will have to be charged twice a day. If a greater amount of water is required, the charge will have to be made more often or a larger vat provided. Adjustments in the treatment may be made by changing the stroke or speed of the pump, or the strength of the chemical solution may be changed to meet changes in the character of the water or other conditions.

A wayside treating plant designed to treat 200,000 gal. of water daily, with 12-hour periods between charging, will require approximately 2,145 lb. of critical material in its construction. Ten of these on an engine district, serving 60 locomotives, will require 21,450 lb. of critical material.

The flues in typical locomotives containing 119 2¼-in. flues and 30 5½-superheater tubes, all 19 ft. 6 in. long, 11,438 lb. In addition, a firebox with 185 sq. ft. of heating surface, constructed of ⅜-in. steel, will weigh 2,832 lb., making a total weight of 14,270 lb. of steel in flues and fireboxes. The amount of steel required for the flues and fireboxes of 60 locomotives of this type is 856,200 lb. Assuming that the life of the flues and tubes will increase from 5 to 15 years, there is a saving in material over a 15-year period of 1,372,560 lb. or 91,504 lb. per year. Doubling the life of the fireboxes from 10 to 20 years represents a 20-year saving in material of 169,920 lb., an annual saving of 8,496 lb. Thus the combined saving in flues and fireboxes is 100,000 lb. per year or more than 4½ times the weight of the materials required for the construction of the treating plants.

The weight of flues and tubes in one of the largest locomotives in service is 32,586 lb., or 1,955,160 lb. for 60 locomotives. Trebling the life of flues and tubes will effect an annual saving of 146,344 lb. over a 15-year period. The firebox of this locomotive weighs 19,500 lb., representing 1,170,000 lb. for the 60 locomotives. Doubling the life of the fireboxes will save this material every 20 years or an annual saving over a 20-year period of 53,400 lb., a combined saving in fireboxes, tubes and flues of 199,744 lb. each year. This represents more than nine pounds of critical material saved per year for each pound required for the treating plants.

These computations do not take into consideration the additional amount of steel saved in arch tubes, crown bolts and stay bolts. In addition to the conservation of material, these plants would save thousands of man hours for war work, and release hundreds of tank and coal cars that are needed badly in the war effort.

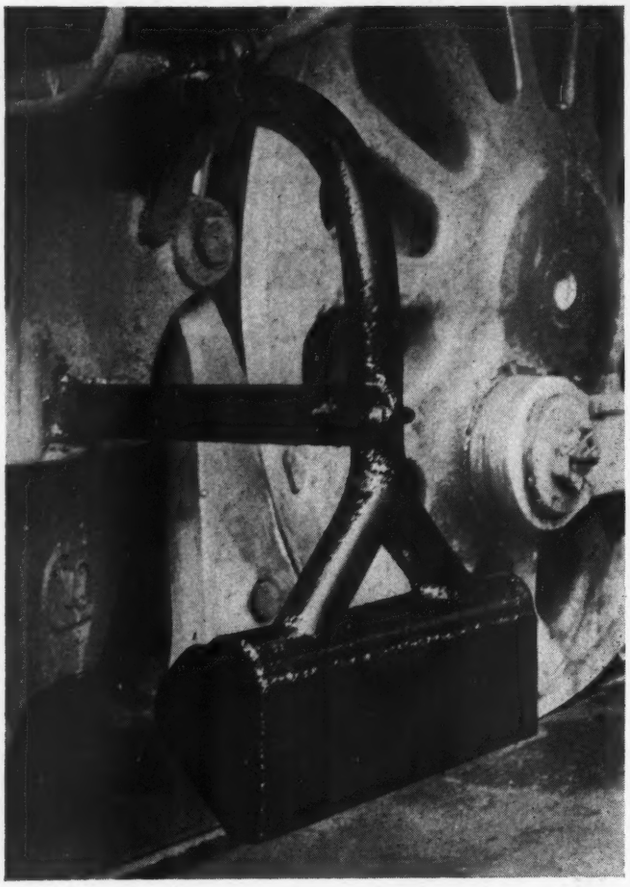
There are few investments to be made on railroads that will show quicker or larger returns in releasing material and labor for adding to the war effort than a properly designed internal water-treating plant.

Locomotive Boiler Blow-Off Arrangement

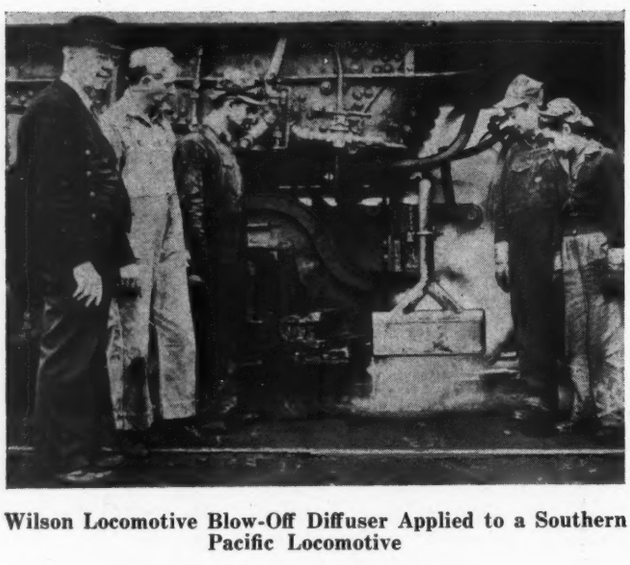
THE road blowing of locomotive boilers has been a necessity for nearly 50 years. Previous to that time, it was possible to allow the concentration of dissolved salts and insoluble matter to accumulate until the boilers could be washed out. As pressures and corresponding boiler temperatures increased, dissolved and undissolved solids gave more and more trouble; and the wasting of concentrated waters from locomotive boilers became an absolute necessity with the advent of water treatment. In early experience with road blowing, the locomotive boiler blow-off cocks were blown openly, sometimes causing the destruction of ballast, damage to property, or injury to personnel.

In later years, with greatly extended locomotive runs, methods for disposing of the blow-off cock wastage on the road had to be revised. This led first to the use of baffling devices under the cab decks, but the complaints of roadway maintenance officers about the destruction of ballast multiplied rapidly, and these complaints were eventually supported by equipment maintenance officers when under-body machinery began to show rapid deterioration, culminating when air-conditioning equipment generally commenced to be installed under car bodies.

A radical improvement in the disposition of boiler blow-off cock wastage, developed by the Wilson Engi-



A Diffuser on the Right Side of the Locomotive—A Similar Unit Is Located on the Left Side



Wilson Locomotive Blow-Off Diffuser Applied to a Southern Pacific Locomotive

neering Corporation, Chicago, was represented in a centrifugal muffler or separator mounted on top of the boiler. This device separated the steam flash from the solid water, delivering the former to the atmosphere and the latter by gravity alone to the tracks. It is widely used today, but has the disadvantage, in cold weather and in some districts, of permitting the recondensation of a small proportion of the steam flash on the boiler jackets and cab windows. This has resulted in local complaints, although these complaints are not general, and are in small proportion to the large number which are in service.

A type of equipment for the road blowing of locomotives, shown in the illustrations, has been developed on the Southern Pacific and is now being made and supplied to individual railroad requirements by the Wilson Engineering Corporation. This device, known as the Locomotive Blow-off Diffuser Set, returns to the earlier baffling principle, but with a wider spread, than heretofore, in diffusion of pressure and distribution of boiler wastage to both sides of the locomotive, without damage to the ballast. A special combination fitting, centered just ahead of the boiler throat sheet, is piped to receive the discharge from each blow-off cock, and from the continuous blow-off valve (if used) and deliver this discharge each way from the center to the diffuser units on both sides of the locomotive. The discharge, again split at each diffuser unit and broken up by a narrow horizontal bottom plate, or ledge, is brought outside the tie ends and as low as clearances allow, in most cases about 14 in. vertically and 30 in. laterally from the rail head.

A large number of locomotives on the Southern Pacific Lines have been equipped with this device, and its inclusion is specified on the locomotives now under construction for this road by the Baldwin Locomotive Works and the Lima Locomotive Works.

Non-Op Case Recessed

WITHOUT explanation, the chairman of the emergency board hearing the demands of the non-operating employees at Chicago, announced, on April 17, that "these hearings will be recessed until April 28 in this room." Prior to the announcement, the board on April 15, assembled the parties separately to discuss a recess. According to reports, the representatives of the unions had asked the board to recess the hearings so that they might go to Washington and determine whether the President intended that the wage increase demands of railway unions come under his order of April 8. It is also reported that at the meeting on April 15, the railroads opposed a recess.

The case involving the demands of the unions on railroad-owned refrigerator lines for a 20 cents an hour increase and a minimum of 70 cents an hour, was started on April 15, upon the completion of the express case, and was concluded on the following day. The demand for a "union" or closed shop for refrigerator lines was handled jointly with the general demand for the "union" shop. The unions presented five witnesses and the refrigerator lines one. Although notices had been served on five refrigerator lines, only three, the American Refrigerator Transit Company, the Burlington Refrigerator Lines, and the Western Fruit Express, presented evidence. The Merchants Dispatch Transportation Corporation was not represented at the hearing and the Fruit Growers' Express Company has made a standby agreement with the unions.

Witnesses for the unions, in an effort to show that the refrigerator lines can afford to meet the wage demands, testified that the earnings in 1941 were 4.86 times fixed charges for the A. R. T. Co., 1.19 times for the B. R. L. and 3.31 times for the F. G. E. Co. They also introduced data to show low earnings for employees.

The witness for the refrigerator lines, E. J. Roth, general manager of the F. G. E. Co., on the other hand showed that the wage increases involved in the hearings would cost the A. R. T. Co., the B. R. L. and the

F. G. E. Co. $1,700,000, while the net operating income of these three companies in 1942 was only $1,369,426. He also testified that the earnings of employees averaged as high as $220 a month in 1943.

The demand of the unions for a "union" shop was begun on April 16, and was completed on the following day. One witness, Charles J. MacGowan, vice-president of the International Brotherhood of Boilermakers, Iron Shipbuilders & Helpers of America, testified for the unions. The railroads presented no witnesses.

Mr. MacGowan compared the prevalence of "union" shops among industries with the lack of "union security" on the railroads and read a prepared statement which, he said, "is not in any manner to be considered a discussion of the legal implications of our request but is only intended to deal with the practical application of a union shop arrangement." The purpose, he said, was to explain the issue by a factual and realistic discussion of the whole problem; to analyze the various types of union management relationships and to justify the demand in the light of recent trends. He contended that the unions' demand is not in violation of the moratorium or rule changes and cited several instances of agreements which he termed rule changes to which the carriers had agreed. "All of these agreements," he stated, "cut into and across many of the treasured rules contained in our collective bargaining contracts, but it has never been contended that these supplementary agreements in any wise amend or change these contracts. The unions are confronted with serious threats to their existence and we feel that this board and the carriers have a right to approach this question sympathetically." He cited the "favorable" attitude of the War Labor Board toward union security and declared that the union shop would stabilize union employment relations, raise the morale of workers, stimulate production and put a stop to "raiding by the C. I. O., the United Mine Workers or any other dualists or irresponsibles."

The legality of the "union" or closed shop on the railroads has been questioned by the railroads since the demands were made and as a result Bruce Dwinell, counsel for the Western Lines and general attorney of the Chicago, Rock Island & Pacific, made a statement before the cross-examination of Mr. MacGowan, as follows:

"In the opening and also the closing paragraphs of his statement Mr. MacGowan said that he was not going to discuss the legal implications involved in this issue, but these legal implications are the implications which are met in this case at the very threshold of consideration, because of the fact that there is a declaration of policy of the government of the United States towards the union shop or compulsory union membership agreements on the railroads. It is represented by the utterances of the Railway Labor Act which make compulsory union membership illegal on the railroads.

"The issues which are, therefore, before this board are fundamentally not those which are discussed by Mr. MacGowan in his testimony, because before those can be considered, the primary question of whether an agreement of this kind could be entered into in any event must be considered by the board, and since the determination of the board on that question cannot be otherwise than that the proposal is illegal and cannot be entered into, the testimony which Mr. MacGowan has given has become irrelevant."

In reply, Frank L. Mulholland, counsel for the unions, said:

"For the present purposes, I have no interest in the question of whether the Railway Labor Act prevents the carriers from entering into the sort of agreement we have requested. I doubt that at any period in the development of this proceeding the board will find itself particularly interested in that question. A dispute may well arise out of the fact that we object to the provisions of a Federal statute. We could go out on strike in protest against such a provision without violating any law in the exercise of our rights.

"This board is here to try a dispute and to make a recommendation to the President of the United States as to how, in its opinion, that dispute can be resolved. All I have to say now is that this board might very properly reach the eventual conclusion that it desires to recommend that the Railway Labor Act be amended, if that be necessary to settle this dispute, and allow these employees to have the union security that they have requested."

Mr. Dwinell's cross-examination of Mr. MacGowan disclosed that "raiding" by other unions is "not as serious as it is painted," that there is a violation of the moratorium agreement and that the carriers will be expected, if the proposal were adopted, to exert coercion and influence in violation of the Railway Labor Act.

Diesel Case Concluded

MEDIATION, as a means of settling the Diesel demands of the firemen and engineers and as an aid in the preparation of its report, was tried on April 20-21, by the emergency board hearing the case at Chicago but no progress was made. Frank M. Swaker, chairman of the board, announced, however, that the board would renew its attempts at mediation from time to time while it prepares its report to the President.

Because the hearing consumed more time than was originally allotted, the board extended the date of its report 20 days or until May 10.

Oral argument was started on April 17 and was concluded on April 20. It followed the testimony of P. F. Buckle, superintendent of safety of the Chicago, Burlington & Quincy; C. M. Puckley, assistant manager of personnel of the Southern Pacific; C. H. Westbrook, controller of the Chicago & North Western; H. H. Urbach, mechanical assistant to the executive vice-president of the Burlington; and C. K. Steins, mechanical engineer of the Pennsylvania, the concluding witnesses for the railroads and rebuttal witnesses for the firemen and enginemen. There were no rebuttal witnesses for the railroads.

Donald H. Richberg, counsel for the Brotherhood of Locomotive Firemen & Enginemen, summarized the evidence of the firemen in a five-hour argument. He said in part:

"There is nothing in the Stabilization Act of Congress or in the Presidential orders that has shown any purpose or intent to stop what might be regarded as normal readjustments of wages such as occur through promotion, through changes of standards, reclassification, inequities between this man's wage and that man's, which make it improper and inadvisable to have two people working at the same job on different wages. Changed conditions of work may increase earnings, and yet during the stabilization program the President issued the 48-hr. week order, which with compulsory and punitive over-time, not only increased individual earnings but total general earnings, which involves considerable interpretation of his own attitude toward the stabilization program. Furthermore, the general exception that has been made in directives of the War Labor Board for employers having few employees, indicates an intention not to prevent any change of any rate that may give an individual more money, or even to prevent individual increases in pay that are insufficient in total amount to have any inflationary effect."

Mr. Richberg also contended that the board is not prevented by the act and orders from granting the demands of the B. of L. F. & E. He argued that carriers' testimony, especially general earning statistics, were irrelevant to the case "because it is not a general wage increase being asked for." He also contended that "the

whole matter of dragging in the mountain and desert differential is nothing more or less than an effort to raise a false issue and raise a prejudice."

Ray T. Miller, counsel for the Brotherhood of Locomotive Engineers, argued for that union. He contended that the Stabilization Act and the Executive orders have no bearing upon the B. of L. E. case because it was established at the time that the Diesel-electric locomotives were put into operation and therefore "antedates the war, Pearl Harbor and all of the executive orders." He continued:

"Railway labor is in a different position than the labor affecting other industries; its basic rate of pay is different; its hours are different; the whole character of its work is different and when we come down to the Little Steel formula, it had no application to any action that might be presented to a Railway Labor Panel except as the panel might have wanted to determine that case as having some bearing on the matter before it."

In discussing horsepower as a basis of pay he said:

"We want horsepower as a basis, but if this board won't give us horsepower, we will take weight on drivers. We don't want it, but we think if you are going to give us weight on drivers, we want the Southern Pacific rate as a minimum.

"Why should engineers be paid on productivity? Because productivity is power. Men are paid on the basis of power, responsibility and authority. That theory is not only carried into the railroad industries, but it exists in every industry. You pay men according to the power that you put into their hands."

Argument for the railroads was presented in three parts on the afternoon of April 19 and on April 20. Edwin A. Lucas, counsel for the Eastern railroads, spoke on behalf of the Eastern carriers but, in respect to the subjects he covered, spoke also for the Western and Southeastern roads; Howard Neitzert, counsel for the Western railroads, argued on behalf of the Western carriers, directing attention to the issue involving the Western railroads and the Diesel locomotive; and S. S. Alderman, general solicitor for the Southern, spoke for the Southeastern railroads and summarized the case.

Lucas Argues for the Railroads

The argument presented by Mr. Lucas dealt with the so-called decreasing ratio of weight on drivers to total weight and with electric locomotive operation. "If I were on a board of this kind," he said, "and had a request to conduct a major operation, in respect to pay schedules of firemen, I would want some idea of how those pay schedules were arrived at and how they worked out.

"The theory that has underlain the designing of locomotives has been to continue to put as much weight on axles as possible and as that has been done, the rates of pay have not gone down as the unions imply, but have actually gone up. The national ratio figures do not support their present theory that there has been a depreciation in the rates of pay incident to the shifting of the weight from the driving wheels to the lead or engine or trailer trucks. The unions have sought for many years to get their wage structure on a standard nation-wide basis. If they want such a wage structure, they should take the benefits and what might be described as the drawbacks."

In discussing the electric helper differential on electrics, Mr. Lucas said that "as soon as you undertake to eliminate the differentials with respect to the 550 electrics in the East, the firemen on the 14,000 steam locomotives will say that 'we are still firing by hand on a substantial amount of steam power and ought to have a higher rate than the helpers on electrics.'"

"The future of the internal combustion engine as a source of power on the American railroads," Mr. Neitzert said, "is limited only by our imagination. If, however, for any reason this type of power is unreasonably restricted in the design of the locomotive or its channels are inhibited, we may not expect the same benefits to be derived from the Diesel. Unless economies can be effected in the operation of the three-unit 6,000-hp. passenger Diesel, there will be comparatively little increased development or use of that locomotive. We may ask ourselves whether it would be in the interest of the employees, the public and the railroads if all the power were Dieselized and if the power will ever be Dieselized if the employees secure the rates of pay and the added men they are demanding.

"The board has been asked to assume that productivity is a proper wage factor. The general tenor of the employees' case is that productivity as the underlying basis should be adopted in lieu of weight on drivers to make a more scientific measure of productivity, translated into terms of employees' wages."

In referring to the East-West wage differential he said that "the evidence shows that on the basis of any test, the Eastern railroads are more productive than the Western railroads. If productivity is a proper wage factor that should be given consideration when the application of the doctrine would serve to increase wages, it also should be given consideration when the application of the doctrines would serve to keep wages down."

Alderman Closes the Carriers' Argument

Mr. Alderman in his closing argument for the carriers stated that "there are only two major bases for the demands of the employees in these cases. First is their theory of productivity, and second is their theory as to safety."

Concerning the inconsistency of the union's demands he added, "it is a great pity that these two organizations were not able to iron out their differences."

On the theory of productivity, Mr. Alderman referred to the assertion of opposing counsel that productivity is power. He admitted that this was true but contended that the productivity of a Diesel-electric locomotive is not the horsepower of the prime mover.

Concerning the factor of safety, he said, "I do not want to say this about safety: Mr. Richberg said the other day that he doubted if this board had anything whatsoever to do with an issue as to conservation of manpower for the war effort; an issue like that, he thought, ought perhaps to be referred to the War Manpower Commission in Washington. In like manner, I say to the board that I very seriously doubt that this board has any jurisdiction over any issue of safety, in connection with the operation of locomotives.

"For many years the Interstate Commerce Commission has been completely and fully charged with all aspects of safety in the operation of locomotives."

Mr. Alderman also discussed the President's Stabilization order and the Little Steel formula and concluded, "The original Stabilization order left four loopholes for wage increases and all of them are out under this last order of April 8, 1943, except the Little Steel formula, and the raising of substandards of living. Those are all that are left. Gross inequities are out; inequalities are out; maladjustments are out; and even that vague phrase, 'furthering the prosecution of the war' is out. All that is left is the application of the Little Steel formula, and the raising of what the President calls, 'up from the very margin of subsistence.'"

Accident in Train Control Territory

THE Interstate Commerce Commission has issued a report on a rear-end collision which occurred at Dixon, Ill., on the Chicago & North Western, at 11.50 p. m., December 26, 1942. The accident occurred as westbound passenger train No. 87, the San Francisco Challenger, a 16-car train, had proceeded about 1,000 ft. after making a station stop, when the rear was struck by westbound express-mail train No. 5, killing 2 employees and injuring 30 passengers and 5 employees. The action taken by the flagman of No. 87 to protect his train is not known, as he was killed in the accident. The fireman of No. 5 reported that he saw no fusee and that no torpedoes were exploded. The inductive type continuous train control including tapered speed control, in service on this territory, includes two audible indicators and a visual indicator in the cab of each locomotive, the normal aspect being green and the restrictive aspect red-over-yellow.

A speed restriction of 50 m. p. h. is in effect on the 2-deg. 59-min. curves through Dixon. When train No. 5 reached a point about 3,100 ft. east of the station, the engineman made a service brake-pipe reduction, and, as a result, the speed was reduced to about 50 m. p. h. The fireman, who was on the left side of the cab, did not observe the aspect displayed by the visual indicator, and stated that no warning signal was sounded by the audible indicators. The fireman first saw the red markers of the preceding train at a distance of about 600 ft. He called a warning to the engineman, who immediately moved the brake valve to the emergency position, reducing the speed to about 40 m. p. h. when the collision occurred.

The only employee in position to observe what aspect was displayed by the visual indicator was the engineman, who was killed in the accident.

Similar Accident at Council Bluffs

A second report issued on the same date as the one mentioned above relates to an accident which occurred near Council Bluffs, Ia., on the Chicago & North Western at 9:25 a. m. October 23, 1942. In general, the same factors were involved and, therefore, the following discussion is limited to the accident at Dixon.

After an extended detailed explanation of the design and operation of the inductive type continuous train control, including tapered speed control, which is in service on this territory, the report of the Commission discusses tests made after the accident as follows:

The visual indicator on the locomotive of No. 5 should have displayed red-over-yellow throughout a distance of 13,835 ft. in approach of the point of accident, and the speed-control mechanism should have operated throughout this distance. If the speed-control mechanism had operated properly, both audible indicators would have sounded, the speed of No. 5 would have been controlled by either the engineman or an automatic-brake application, and the speed at the point of accident could not have been greater than 23 m. p. h. However, the speed was about 40 m. p. h. at the time of the accident.

After the accident, extensive tests of both the wayside apparatus and the locomotive equipment were made in an effort to discover any condition which could have caused the failure of the automatic train-control system to perform its intended functions under restrictive conditions. In these tests all apparatus and each circuit of the wayside equipment functioned as intended. Tests of the undamaged parts of the locomotive equipment disclosed one condition that could have caused or contributed to the cause of the failure of the train-control system to function properly. The front wheels of the engine truck of locomotive 2909 were installed in another locomotive, and tests were made in which a speed of 83 m. p. h. was attained. The voltages induced in the receiver coils by the rotating magnetic fields of the wheels resulted in a current in each winding of the primary relay, but these currents, although of sufficient magnitude, apparently either were not of the right frequency or did not have the proper phase relation to cause the primary relay to operate, and a green aspect was not displayed.

Mechanism Working 35 Min. Before Collision

The fireman stated that the speed-control mechanism and audible indicator were functioning properly 35 minutes before the accident, when the train was proceeding through a restricted zone at DeKalb, about 40 miles east of Dixon. It was not definitely established whether the drive shafts were broken prior to the accident or as a result of the collision. However, if they had become broken prior to the accident, the engineman would not know this condition unless he observed the visual indicator after the locomotive entered a restricted zone.

In the Commission's reports approving the installation of this device on another division of this carrier, attention was called to the design of the governor drive and it was stated that, "If it should be found that the intended protection is not afforded by the present construction and maintenance, other means must be provided for insuring the integrity of the device in this respect." According to records of the carrier, during the past 12 years there have been 72 failures of this part of the device prior to the date of this accident. None of these resulted in an accident; however, in view of the facts and circumstances disclosed by this investigation, the automatic train-control equipment should be rearranged so that the audible indicator will sound whenever the visual indicator changes from green to red-over-yellow, regardless of whether the speed-control mechanism is operating; also, means should be provided to furnish definite information to the engineman at the time when for any reason a failure of the speed-control mechanism occurs.

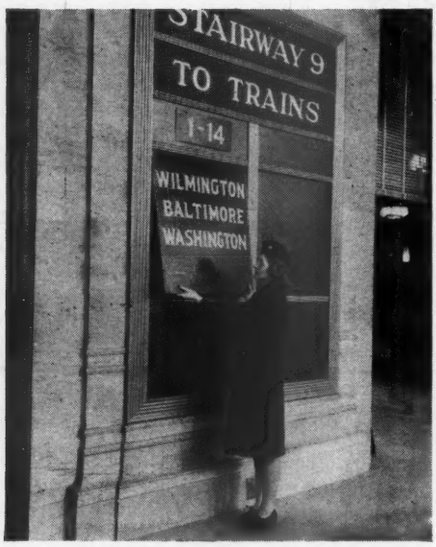
In the territory involved there are no wayside signals except at interlockings. If automatic block signals in connection with the automatic train-control system had been in use and the cause of the failure of the automatic train-control system was confined to the locomotive equipment, the wayside signals would have displayed aspects indicating that the preceding train was a short distance ahead, and this accident would have been averted.

Findings and Recommendations

It is found that (a) the cause of this accident was the failure of the automatic train-control system to function as intended, and (b) the operating rules were not enforced or obeyed.

It is recommended that (a) wayside signals be installed in connection with the automatic train-control system on this line; (b) cab signals conforming to specifications and requirements prescribed by the Commission's order of April 13, 1939, be installed on locomotives of this carrier in connection with the automatic train-control system; and (c) operating rules be enforced and obeyed.

Nowadays There Are Few Railroad Departments Uninvaded by Women



FEMININE passenger brakemen on the Pennsylvania have heretofore been pictured in these pages—and the road now has 20 women regularly employed as yard brakemen along the Philadelphia waterfront. At several P. R. R. stations, women gatemen and ushers are on the job announcing trains and inspecting tickets. The one shown here is on duty at 30th Street, Philadelphia.

The Pennsylvania employs many women at coach and engine cleaning, the scenes shown in the pictures being typical of many points. The work being done by the machinist's helper is indicative of the sort of unusual jobs for which women are showing their capacity, given the chance to learn.

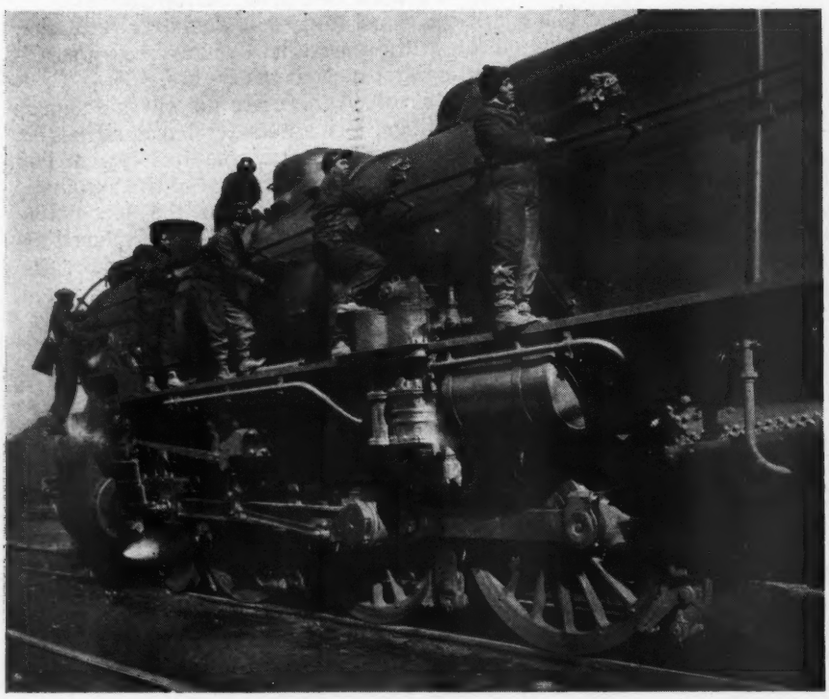
The Reading is using women, among other occupations, at various jobs in stores and track departments—and reports them as particularly successful at reclamation of scrap, which, after all, should come natural to a thrifty housewife. This company has 27 women in its track gang at West Trenton, N. J. Women are also employed as riveters in the shops and as freight handlers.

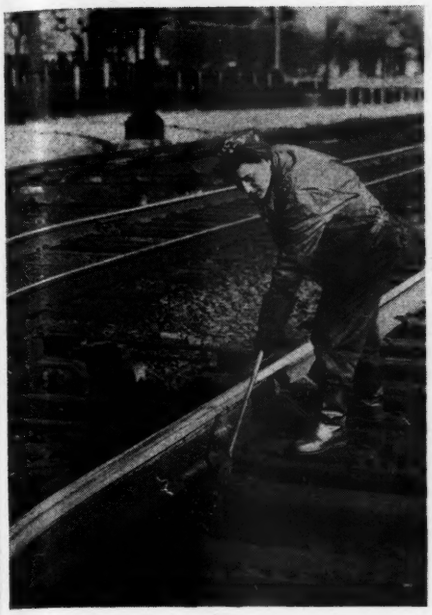
The quartet of women drafts-

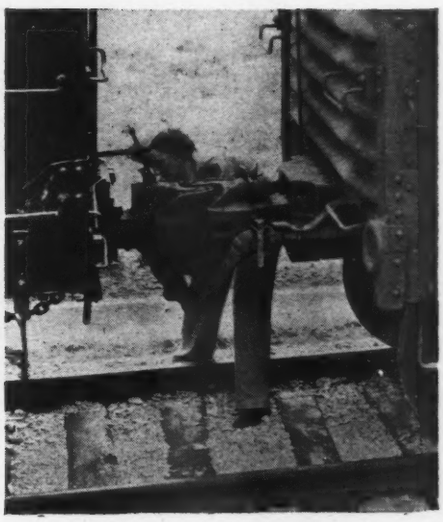
ABOVE: At Left, a P.R.R. Yard Brakeman on the Job. Right, a P.R.R. Passenger Station Usher

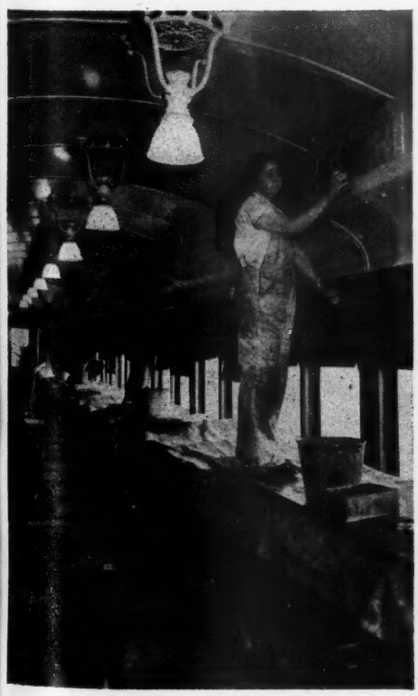
LEFT: Reclaiming Scrap Materials on the Reading

BELOW: At Left, Negro Women Clean P.R.R. Locomotives—Right, a Feminine Machinist Helper at P.R.R. Wilmington Shops Applies Scales to Test Pantograph of Electric Locomotive









men on the Boston & Maine are the first of their sex to be employed at such work in 117 years of the road's history.

At the San Jacinto, Tex., Ordnance Depot "Joe" is the nickname given to Thelma Elene Duncan—a college graduate, 28. "Butch" is Velma Faye Schoenemann, 19. Both are Texans.

Photographs are by courtesy of the railroad named in each case. The San Jacinto Ordnance Depot pictures are by the U. S. Army.

TOP: At Left, a Woman Track Worker on the Reading. Right, Reading Stores Department Employees

MIDDLE: At Left, Draftswomen in the B. & M.'s Engineering Department. Right, Yard Brakeman "Joe" at San Jacinto Ordnance Depot

BOTTOM: At Left, Women Coach Cleaners on the P.R.R. Right, Switchman "Butch" on the Job for the Army at San Jacinto

B.&O. Redecorates Colonial Diners

Simpler furniture and decorations reduce maintenance without sacrifice of attractiveness—Capacity also increased

THE Baltimore & Ohio procured in 1926 twenty dining cars with interiors furnished and decorated in Colonial style. Recently, when faced with the need of redecorating and reconditioning these cars, it was decided to dispense with the Colonial furnishings and fittings for which replacements are now either difficult to secure or are completely unavailable. In the new interiors, although greatly simplified in detail, there has been no loss of attractiveness and they have the advantage of low first cost and reduced maintenance.

The cars were fitted with hand-carved chairs of Colonial pattern. These have been replaced with chairs of relatively simple design, costing less than one-third of those they replaced. Originally the windows had multiple interior panes with arched mirrors above and leaded glass in the inner sash. These have been replaced with plain double windows. Elaborate egg and dart moulding has been replaced with plain and other decorations have been similarly simplified.

Seating Capacity Increased

The cars have been painted, inside and out, new drapes hung at the windows, the floor recarpeted, new chairs and tables installed and new lighting fixtures added. The seating capacity has been increased. The diners formerly had four-seat tables at one side and two-seat tables on the other, making a total of 36 seats. Four-seat tables are now used on both sides, seating a total of 48.

The interior has been repainted with Dulux. The ceilings are oyster white, the upper side walls and panels are buff with beige trim, the lower side walls are tan and the mouldings of the panels between and above windows are oyster white.

The bulkheads and buffet panels are blue with oyster white moulding.

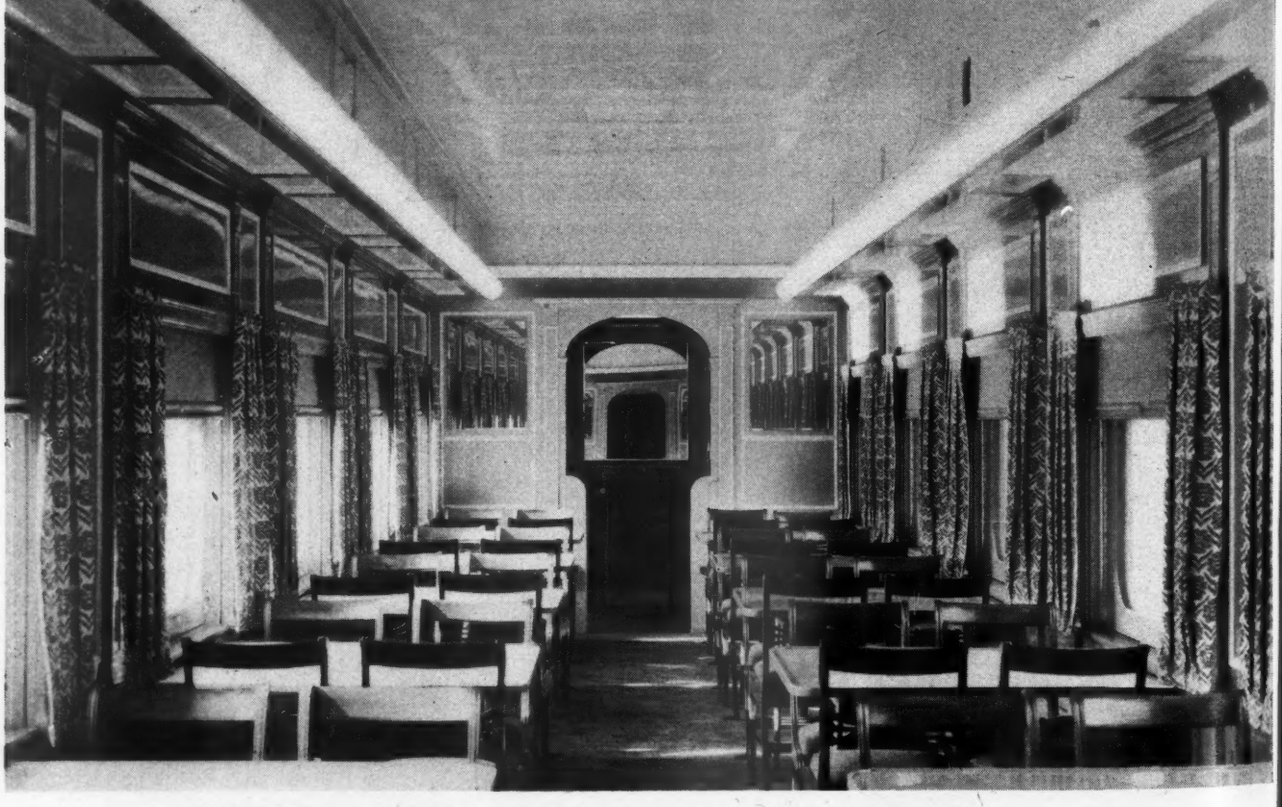
The pantasote shades are a peach color on the inside, while the drapes have a blue flower pattern with white linen back.

The chair coverings are Normandy blue Grospoint. The Bigelow Sanford Consort grade carpets are figured and mulberry in tone.

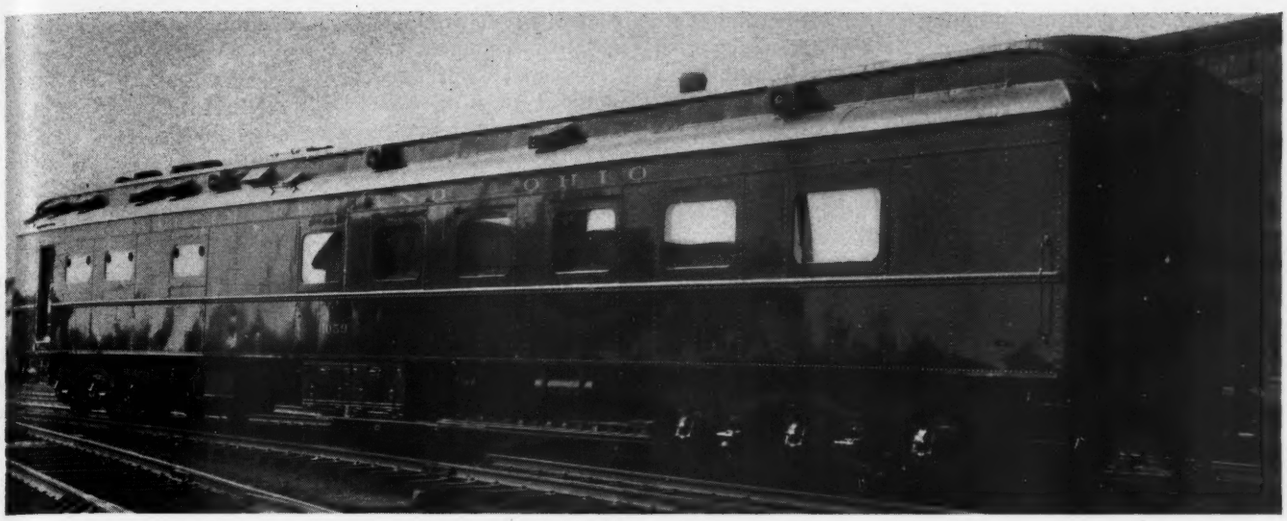
Lighting

The lighting fixtures in the dining section have been changed to two continuous lighting units at the sides of the deck sills. These replace the Colonial design center ceiling and wall bracket fixtures; the cost of reconditioning the old units being sufficient to warrant the installation of the new.

The light source in the new fixtures consists of 15-



A Baltimore & Ohio Converted Colonial Diner



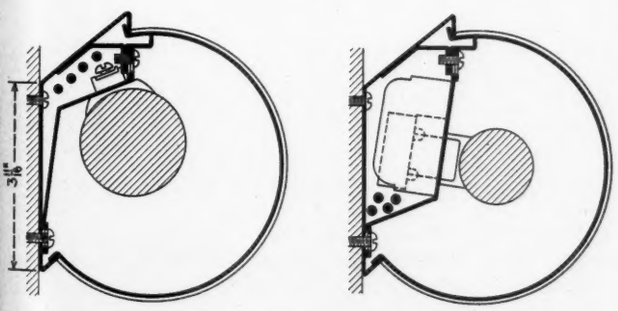
The Exterior Appearance of the Cars is Little Changed by the Conversion Except for the Windows

watt lamps, 54 on each side, on 8 5/16-in. centers. Each row is housed in a cylindrical fixture which consists of mounting plates and plastic diffusers made in sections to form a continuous unit. The plastic diffusing sections snap into flanges at the edge of the mounting plates and require no screw fastenings.

The continuous reflector, also made in sections, is an ingenious device. Placed as shown in the left-hand drawing, it is now used to mount the incandescent lamps in angle sockets. When turned over, as shown in the right-hand drawing, the reflector is properly placed for the mounting of 40-watt, 48-in. fluorescent lamps and a space is provided behind the reflector for the fluorescent-lamp auxiliaries. Both sides of the reflector are coated with white heat-resisting enamel and they are punched and tapped for mounting of both incandescent and fluorescent sockets and auxiliaries.

The lighting units are mounted so that the lower edges are slightly below the decks to avoid leaving the decks in shadow.

Lighting units in the passageway and over the buffet are also designed so that the present incandescent lamps



Sectional View of a Lighting Fixture—The Reflector May be Used for Either Incandescent or Fluorescent Lamps

may be replaced with fluorescent. The lighting equipment was supplied by the Safety Car Heating and Lighting Company.

No changes have been made in trucks, superstructure or the standard Baltimore & Ohio air conditioning with which the cars are equipped.

The work of reconditioning the cars was done in the railroad's shops in Baltimore, Md., under the direction of W. B. Whitsitt, chief engineer, motive power and equipment.

Renders Opinion Against Pullman

A THREE-judge expediting court for the District Court for the Eastern district of Pennsylvania handed down its opinion, on April 20, in the government suit against the Pullman Company on charges of alleged violations of the Sherman and the Clayton Acts. Although the court concluded that "there has been a violation of the Sherman Act," it held that the final question is the equitable relief to be had in this suit. As a result it stated that "the formulation of a decree will await further discussion and hearing upon certain points which may be suggested by the parties."

The government, through Thurman Arnold, assistant attorney general, contended in a suit filed 18 months ago that the Pullman group of companies held an unlawful monopoly in operating sleeping car services in interstate commerce. The companies denied they held a monopoly. The expediting court which held hearings and rendered an opinion consisted of Judges Herbert Goodrich, John Briggs, Jr., and Albert Maris of the United States Circuit Court of Appeals.

The Court Outlines the Case

"The object to be sought, for the convenience of the parties as well as the court," the opinion stated, "is a decree which will embody the necessary elements of suitable equitable relief and require a minimum of supervision by the court and reports and data by the parties. Several things obvious for consideration in this connection, the Pullman Company has already expressed its willingness to do. Indeed some of them, it is said, have already been put into practice by Pullman. We agree with the government's contention that this does not make an order requiring such practice less appropriate. If the things done are indicated to remove certain com-

pany activities from the prohibition of the Sherman Act, a decree requiring them is not less appropriate because the company's new policy, as distinguished from the old, may already include them. The decree, when issued, will insure the continuance of such reformed practices.

Six items were deemed relevant by the court for inclusion in the decree. These are as follows:

1. The separation of the business of the Pullman Company from that of Pullman-Standard Car Manufacturing Company and the simplest method of accomplishing that separation.

2. The establishing of the right of a railroad to purchase used sleeping cars from the Pullman Company.

3. The terms to be included in a direction that Pullman shall be required to operate and service sleeping cars designed and built by any manufacturer and tendered to it for operation and service.

4. The right of any railroad which wishes to operate all or a portion of its own sleeping car business so to do, regardless of existing sleeping car contracts with the Pullman Company.

5. The establishment of the obligation of the Pullman Company to furnish through-line sleeping car service to any railroad or group of railroads.

6. The elimination of exclusive dealing contracts between the Pullman Company and the railroads and the abrogation of such provisions in existing contracts.

In its 26-page opinion the court pointed out that, "the plaintiff does not contend that the mere fact that one engages in an interstate commerce business in which he has no competitors, makes him a violator of the Sherman Act. It contends rather that Pullman is the sole entrepreneur because of the successful completion of a plan formed in the early days of the company's history to eliminate its competitors and its successful arrangement of affairs with contracting railroads to the end that no one else can now get into a position to compete either in manufacturing, furnishing or operating of sleeping cars."

The opinion cites a number of companies purchased by Pullman, the last of which was the Wagner Palace Car Company in 1899, but says, "the defendants point out, and the plaintiff concedes, that in no case was the acquisition by Pullman the result of predatory practices such as misrepresentation, temporary price cutting to kill a competitor, or the like.

"We do not think that the issue as to whether defendants have violated the Sherman Act turns upon who initiated negotiations for purchase or whether the price paid by Pullman was high or low. Pullman did buy and whatever the price paid was, it was not too much from Pullman's point of view, for it built the units secured into an integrated and successfully operated whole. Competitors were all absorbed. The plaintiff contends that mere possession of exclusive control over a commodity or service constitutes monopolization; a fortiori there is monopolization when such power is obtained by acquisition of competitors."

In commenting upon directorates, the opinion said, "The significance of interlocking directorates is not that their existence, by themselves, constitutes a violation of the Sherman Act. They did raise problems for Pullman in connection with the Clayton Act and the evidence shows concern manifested by Pullman's officers to find a way that they considered valuable directors could be retained without running afoul of that statute. Standing alone it does not constitute a violation of the Sherman Act, but it is significant for consideration as one of the figures in the whole picture through which a complete control of sleeping car transportation was accomplished and is maintained.

"The facts presented in evidence constitute, in our opinion, an infraction of the monopoly section of the Sherman Act. We have here defendants who are not only the sole purveyors of sleeping car service, but who got themselves into that position by buying out competitors with the express interest, as recorded in their own corporate minutes, of eliminating what they pleased to call 'useless competition.' Then having acquired sole possession of the field they have so arranged matters that no one else can enter it. This is equally true of the business of manufacturing sleeping cars as it is of the business of servicing sleeping cars.

"In addition to the existence of monopolistic power, there has been shown a series of instances of its exercise as, for example, the exclusion of the Budd products from sleeping car business; the insistence on all or nothing clauses in contracts; the obdurate resistance to changes in type of cars pressed for by railroad customers; and the guaranty clause to protect Pullman in matters of earnings. These we take it are monopolistic practices. They show defendants' control of the market."

Pullman Will Appeal

"The opinion of the court in Philadelphia," David A. Crawford, president of the Pullman stated, "is disappointing of course, and the Pullman group of companies will take an appeal to the Supreme Court of the United States promptly after a decree is entered. It is our view and that of our counsel that the Philadelphia decision is completely at variance with the evidence which was offered in the trial and also contrary to the applicable principles of the anti-trust laws as passed by Congress and as interpreted by the Supreme Court.

"Ours, after all, is a business which has been conducted under the jurisdiction of the Interstate Commerce Commission since 1906 and we, naturally, find satisfaction in the fact that the Commission has raised no voice of complaint in this case; that railroad officials unanimously testified that the Pullman pool system is efficient, economical, inures to the benefit of the railroads and the public and should not be disturbed, and that the public itself has endorsed the Pullman operation throughout the past 75 years by its patronage of our service in an operation which the government has never before challenged, although the Sherman Act has been on the statute books since 1890.

"What seems to be involved here is the question of whether a company is to be deprived of the fundamental American right to bargain at arms' length with its customers and to select and make for itself the cars, the tools it uses in rendering to its customers the services it contracts to deliver. Pullman has no power over the railroads; it is simply a concessionaire doing business on railroad property under contracts with the railroad owners, which need not be renewed by any railroad that wants to perform its own sleeping car service."

THE CANADIAN NATIONAL has many parcels of land along its right-of-way in sparsely inhabited districts in both the United States and Canada which are suitable for cultivation. The road is now planning to make this land available to its employees and to encourage them in planting victory vegetable gardens to help eke out food supplies. No formal leases will be prepared, but employees taking advantage of the offer will be expected to leave the property in good condition.

Communications and Books . . .

Steam Locomotive Has Important Advantages

CANTON, OHIO

TO THE EDITOR:

The article in the April 10 issue on comparison of the factors involved in the selection of railway motive power as between electric, steam and Diesel-electric has been noted with much interest and a considerable measure of surprise.

The characteristics of electric motive power are such as to limit the use of this type of motive power to certain localized conditions, and on sections of the railroads where these conditions are favorable the use of electric power is amply justified by experience.

The comparison of steam and diesel-electric locomotives quoted in the article cannot be given as favorable consideration. The classification lists four definite advantages for the steam locomotive as against 15 specially enumerated advantages for the Diesel-electric. This form of comparison partakes of the nature of one of the ancient fables, in which the fox utilized his full bag of a thousand and one tricks before he was run down and killed by the hounds, whereas, in comparison, the cat utilized her one trick by climbing a tree—thus escaping the hounds, living out at least one more of her normal lives, and completely discomfiting her pursuers.

The steam locomotive likewise is in possession of two outstanding tricks, which in all probability will continue the use of this form of motive power as far into the future as it is safe to forecast,—certainly as long as the life expectancy of the current generation of railroad men.

The first of these tricks ("characteristics," using the classification of the article) is the relative cost of $35.00 per hp. for steam as compared with $87.50 for the Diesel, or 2½ hp. of steam locomotive for the cost of one horsepower of Diesel; that is to say, that $10,000,000 worth of new steam locomotives will produce the equivalent in power of $25,000,000 worth of Diesel locomotives. The economic value of this trick does not require further explanation to those supply men whose work involves their persuasion of railroad managements to spend the extra $15,000,000, nor to the railroad managements upon whom falls the duty of raising the extra $15,000,000.

The second trick (characteristic) of the steam locomotive consists of the fact that a supply of fuel for that form of motive power has been blocked out sufficiently to last for the next thousand years. On the other hand, the supply of oil for Diesel locomotive fuel consists of a reserve, in the ground, of 20 years supply. Furthermore, oil is being drawn from this meager supply at a greater rate than new reserves are currently being discovered. The current price of this fuel is not sufficient to justify the expense incident to the discovery and blocking out of additional oil reserves.

Oil is necessary for the prosecution of a world wide war. Naval vessels of the Allied Nations are dependent absolutely on the use of oil as fuel. The armored equipment and military transport of the Allied armies are likewise completely dependent on the supply of oil. Oil is the basic requirement for the high octane fuel that is giving the Allied Nations that preponderance of air power that is making history from the growing series of defeats sustained by the Axis powers.

The use of oil as a locomotive fuel for the duration to the extent that it withdraws this source of power from the Allied navies, land transport and air power is helping the Axis powers to just that extent.

A third point to keep in mind, while not necessary a characteristic of steam and Diesel power, is the practice prevailing over the past few years of comparing the performance of Diesel power constructed within the last few years and embodying the most modern practice with steam power represented by the current inventory of steam locomotives on American railroads. Records show that more than half of these are 25 years old or older.

There exists a dearth of comparison of Diesel power with steam locomotive power based on the latest practice of that class of power. The steam locomotive equipped with improvements compares favorably in performance with Diesel power. Witness the performance of a 1942 model 4-8-4 locomotive which hauled 12 passenger equipment cars against an adverse grade of 70 ft. per mile at a speed of 70 m.p.h. and then straightened out on the level, running 90 to 100 m.p.h. The engine crew advised that the Diesel would make the equivalent speed on the level run slightly faster down hill, but would not nearly approach the performance of the steam locomotive on the 70-ft. grade.

There is considerable question as to the matter of damage to road bed as between the two classes of motive power. The steam locomotive under this heading is classed under a "disadvantage" while the Diesel is classed as having an "advantage," the difference being due to the presence of the dynamic augment as a characteristic of the steam locomotive. The best practice as regards the use of light-weight reciprocating parts and the balancing of the steam locomotive to utilize to the full the reduction in weight of these parts develops a dynamic augment at diameter speed of only about 20 per cent over and above the static weight on the driver, while at the same time reducing the nosing effect of the steam locomotive to a negligible factor.

Electric and the Diesel-electric locomotives do not have the dynamic augment, but the nosing effect of both these classes of locomotives is a serious factor and operates at a distinct disadvantage as compared with the steam locomotive. This condition is due to the fact that the rail is six times stronger to resist vertical load, such as dynamic augment, as compared with horizontal forces as developed by nosing. An increase of 20 per cent vertically as imposed by dynamic augment is a small factor where the increase in strength vertically is 600 per cent over and above the strength of the rail to resist lateral forces. It can be said therefore that the steam locomotive, balanced in accordance with the best modern practice and with light-weight reciprocating parts, operates at a distinct advantage over either the electric or Diesel-electric as regards stresses in the rails.

The steam locomotive has been the principal factor in advancing the art of transportation on railroads for upwards of 100 years, and in the minds of those conversant with the outstanding improvements made in the steam locomotive in recent years the possibilities of still further improvement will give the steam locomotive a new lease of life. While the machine confesses to the age of 100 years, the weight of evidence gives indications that the steam locomotive is just entering its period of most useful life and, further, that the demise of the steam locomotive has been placed so far into the future centuries as to be utterly unpredictable.

T. V. BUCKWALTER,
Vice President,
Timken Roller Bearing Company

New Book

Railway Fuel and Traveling Engineers Proceedings.—for 1942. Compiled and edited by Secretary T. Duff Smith, 327 South LaSalle street, Chicago. 198 pages, illustrated. Bound in imitation leather. Price to non-members, $3.00.

While no annual meeting of the Railway Fuel and Traveling Engineers Association was held in 1942, the various standing committees were active and developed constructive reports which are presented in full in a yearbook recently issued to the members and made available to non-members at the price indicated above. The book, like previous volumes, is carefully prepared, easily readable and presents information of exceptional value relating to the efficient use of railway fuel and other pertinent factors in improved locomotive operation. Formal reports are included on coal equivalents; coal sizes; gas-turbine locomotives; front ends; air brakes on Diesel freight locomotives; firing practice, coal and oil; road foremen and Diesel locomotives; and the utilization of motive power.

Railroads-in-War News

Men Can't Quit To Take Big Pay Jobs

McNutt's order puts limits on transfers from specified essential industries

War Manpower Commission regulations effective April 18, which are designed to stop transfers to jobs at higher wages "unless the shift is in the interest of the war program," were drafted to carry out the wage and employment stabilization provisions of President Roosevelt's "hold-the-line" executive order, the WMC pointed out in recent statements.

The regulation is intended to prevent an employee from shifting from work in an essential activity to another where higher wages are paid, if the higher-paid activity is not on the essential list, or if the shift is not subject to and in accord with one of the WMC employment stabilization plans. It does not prevent transfers from activities not on the essential list to those that are, even if an increase in wages is involved, the WMC emphasized, nor does it as yet prevent transfer from one non-essential activity to another.

If the shift is from one essential activity to another, the transfer will be permitted where no wage increase is involved except where the employment is covered by employment stabilization plans, it was explained. If it is so covered, then the change can be made if done "for reasons that are consistent with the provisions of these plans," whether or not a higher wage is involved. If the shift is from one essential activity to another with higher pay and is not subject to one of the employment stabilization plans, the change cannot be made.

An essential activity is described as one listed by the WMC as required in connection with the effective prosecution of the war. Some 35 basic activities and industries are thus classified. Production of transportation equipment—including motor vehicles, locomotives and parts, and railroad cars and equipment—and transportation services—embracing air, bus, local transit, pipeline, waterway and warehousing operations as well as line-haul, switching and terminal railroads, railway and air express, freight forwarding, and rail inspection—are two of the essential categories.

The WMC pointed out that the regulations "in no way" prejudice relations between an employee and his employer, as they are concerned solely with transfers from one employer to another.

Penalties are provided for violation of the order by employee or employer, for which authority is found by the WMC in the executive order's derivation from the Stabilization Act of October, 1942. An employer who hires an employee in violation of the regulations may not count wages paid the employee as an income tax deduction or a part of his business costs in connection with the fulfillment of federal contracts. In addition, the employer and the employee are both subject to a fine of $1,000 and a year in jail if found guilty of violating the provisions of the order.

N. Y. Central Plane Downs Six Nazis

The B-26 Marauder medium bomber, purchased for the U. S. Army Air Forces with $250,000 contributed by New York Central employees (*Railway Age*, September 12, 1942, page 426) has been assigned to non-combat duty after having shot down 6 Nazi planes over Tunisia and Sardinia.

The plane, named "New York Central" in recognition of its donors, made 13 missions in North African combat between January 2 and February 24, accomplishing 50 flying hours in such servcie. On its last mission the plane was damaged and made a crash landing. Repaired, it was deemed no longer serviceable for combat duty but will remain in service behind the lines.

The squadron which is now flying and servicing the plane at a North African base includes Sgt. A. J. Gibbs of Peekskill, N. Y., who as an employee in the New York Central's passenger accounting office was one of the contributors to the plane's purchase.

New Symbols for CMP

An entirely new set of identification symbols to be used in the third quarter of this year and thereafter in paper work relating to so-called Class B products under the War Production Board's Controlled Materials Plan has been prepared by the WPB to afford it a means of determining at mill levels the uses to which the materials will be put. The list, made public April 14, provides symbols for various categories of products under the WPB's different industry divisions.

Under the Transportation Equipment Division, for example, are two groups of symbols. One, the B-2 category, is termed "Internal combustion engines—locomotives." The other, the K-8 group, includes railroad car and locomotive accessories, air brake actuating mechanisms, maintenance of way equipment, shop equipment, and track and signal equipment.

Norris City Loads 1,049 Cars in Day

Oil movement to East in 1944 to top requirements, Senate is told

In dispatching 1,049 tank cars, loaded with 9,693,000 gallons of crude oil, from the Norris City, Ill., terminus of the so-called "big inch" pipeline from the Texas oil fields, on April 14 a record was set for the largest tank car movement from any point in the country, and probably in the world, the Office of Defense Transportation pointed out last week.

In moving a 75-car train in and out of the terminal every 52 minutes during the day, and in accomplishing the operation over a single track line that normally handled only four or five trains a day, "the utmost efficiency and caution" were required, said the ODT. The operation was largely responsible for the railroads' achievement in increasing the average deliveries of petroleum products by tank car to the Atlantic coast area to record-breaking levels of well over 900,000 barrels a day, the statement added. For the week ended April 10 the average daily movement into District No. 1 by tank car was 924,079 barrels, and in addition an average of 24,667 barrels a day reached New England in the form of kerosene in metal drums, Petroleum Administrator Ickes announced last week.

The operation at Norris City was described in an ODT press release, which explained that empty tank cars returning from the East are received at Mt. Carmel, Ill., and there inspected. Bad order cars are cut out at that point, and light repairs are made at the yards. From Mt. Carmel road engines move the empty cars in solid trains over the New York Central's line to Norris City, 44 miles, where switch engines break up the trains and spot the cars at the loading racks. Train lengths are limited by the capacity of passing tracks to 75 cars.

While the cars are loading—the racks have a capacity of about 50 cars per hour—they are given a final inspection to check their condition for the high speed run to the East. The loaded cars are assembled into trains by the switch engines and taken over by road engines returning to Mt. Carmel, at which point symbol trains are made up for the eastward movement.

There are now about 10,000 tank cars in the pool serving Norris City, the ODT stated. These cars have an average capacity of 9,240 gallons, but larger cars are

(*Continued on page 836*)

Army Railroaders Deliver the Goods

Not knowing the road doesn't prevent them from getting munitions to fighters

"Three nights after the American troops landed on the North African coast, Lieutenant Colonel Edward T. Barrett, of the Army Transportation Corps (formerly division engineer, D. & R. G. W.), took a chew of tobacco, climbed into the cab of a wheezy locomotive on a narrow-gage railroad, and set out in search of a regiment of infantry of the United States Army." Thus begins a report by the War Department of how Military Railway Service men let nothing deter them from "passing the ammunition."

"Behind the locomotive rolled ten cars of ammunition the regiment needed badly. Ahead stretched two rusty streaks of rails. Somewhere along the line the American troops had dug into fox holes under heavy enemy fire they were unable to return. Except for one man, the train crews and yardmen who ordinarily operated the railroad had fled to the hills as soon as the Americans landed. Colonel Barrett and the nine others who made up the American crew took the lone Algerian along—on the theory that he might be useful to talk to the natives, though he showed unmistakably he didn't relish the trip into the battle area.

"The train started from Arzew, a tiny port with berths for only two ships, located just east of Oran. The troops had landed in barges, to encounter immediate enemy action, whereupon two American ships, loaded with supplies, pulled into the berths. A company from a Military Railway Battalion had just gone ashore to size up the locomotives and cars on the line that ran to the pier when a courier chugged up on a motorcycle and reported the regiment's plight.

"Colonel Barrett and those of his company, 90 per cent of whom were recruited from American railroads, decided to get up steam in the locomotive and haul a string of cars to the pier so ammunition on one of the ships could be loaded with ease. They found a little coal in the tender but not nearly enough, so they used cork as substitute fuel. They found the cork on the pier, a quantity that had been brought there for shipment, and it generated an extremely hot fire. The train, finally loaded, started on its uncertain trip in the middle of the night. It ran without lights to avert enemy fire.

"The engineer hung out of the cab window as far as he could in an effort to see what was ahead, but the night was very black. The fireman shoveled cork. The trainmen kept rifles in hand, for it was probable that the rails that twisted and turned up the grade from the port would stretch into enemy country. The engineer kept his hand off the whistle, but the train made racket enough. The engine grunted, the cars creaked, and there was a glow from the firebox. Naturally, headway had to be slow.

"About four miles from the port the engineer heard a voice in the darkness alongside the track. 'Halt!' came the command in unmistakable American English. The train came to a stop. The soldiers jumped out of the fox holes and ran to the loaded cars. They broke open the cases and took the ammunition they needed, all the while under enemy fire.

"The cars were unloaded by daylight and the train started back to Arzew when suddenly two airplanes appeared overhead. They were Italian craft with markings changed so they appeared to be British. They fired with machine guns, but the shots all missed."

"What did you do?" somebody asked Colonel Barrett when the train reached Arzew safely.

"We just pulled the throttle wide open," he said.

Railroading in North Africa

It appears that railway maintenance in many parts of North Africa was allowed to fall below normal standards after the collapse of France, and before our troops landed there—according to a recent account in the Railway Gazette (London). The problem of supply which the Allied Forces have faced in North Africa, therefore, must have been a difficult one. British and American engineers are reported to have achieved remarkable results in reorganizing the railway systems in the battle zones and French overseers, with the help of Arab laborers, have carried out routine maintenance in areas further back.

Motor trucks were used to help maintain lines of communication, but because of bad road conditions, this form of transport also presented rigid limitations. Our London contemporary believes that the time needed for preparation of adequate railway supply lines may account, in part, for some of the time which elapsed between the arrival of the Allied armies and their real beginning in closing in on the German forces.

New Civilian Supply Director

While consideration of proposals to establish an independent office of civilian supply continued in Congress, War Production Board Chairman Donald Nelson on April 15 announced the appointment of Arthur D. Whiteside, president of Dun & Bradstreet, as WPB vice-chairman in charge of civilian requirements. Mr. Nelson recently appeared before a Congressional committee in opposition to the proposed independent civilian supply set-up, while Joseph L. Weiner, director of the WPB Office of Civilian Supply, has favored divorcing that agency from the WPB and giving it independent status as the representative of all civilian activities before the Requirements Committee and in other situations affecting the allocation of critical materials.

Better Stay at Home This Summer—J.B.E.

ODT director promulgates some rules of wisdom for summer travel

All railroad requests for authority to operate additional summer services involving use of Pullman sleeping-car equipment will be denied, said an Office of Defense Transportation April 22 press release which went on to announce this year's ODT policy of limiting approvals of additional summer services "to coach trains operated in the period between Saturday noon and Sunday midnight, utilizing primarily commuter equipment that would otherwise be lying idle during that period, and additional trains of a semi-commuter type on other days of the week within a radius of approximately 50 miles of a terminal." Passenger-train schedules were frozen, under ODT's General Order No. 24, as of last September 26, "when most of the 1942 summer services had been withdrawn," the release recalled.

An accompanying statement from ODT Director Eastman called for the elimination of "strictly non-essential travel," which he defined as "trips to visit friends in other cities, trips home for the week-end, trips of a sightseeing nature, or trips for other social or pleasure purposes." Mr. Eastman mentioned surveys which have indicated that "no less than 25 per cent of all passengers on regular trains and buses" are making journeys of that type; and the 25 per cent does not include "vacation travel, visits to servicemen, or necessary personal trips."

Mr. Eastman appraised vacation travel as "not strictly essential," although "it may be classed as desirable." Nevertheless, he added, it must be limited "in every reasonable way." Thus his warning that individual vacationists "must take it upon themselves" to cooperate in the following ways:

Take the whole vacation at one time; don't split it up into several short vacations or a number of long week-ends.

Spend the vacation at home or as near home as possible.

If the vacation is spent away from home, go to one place and stay there; go and return on days other than Fridays, Saturdays, or Sundays, so as to avoid the week-end travel peak.

Avoid over-night trips; travel on day coaches; and carry box lunches on the trains, so as not to add to the strain on Pullman and dining-car facilities.

Carry as little baggage as possible and check the heavy pieces.

Make plans sufficiently flexible to allow for transportation contingencies requiring last-minute changes.

Be prepared to expect delayed arrivals, crowded conditions, and lack of the usual travel comforts.

And because "these measures for travel conservation will not be enough," Mr. Eastman is appealing to employers, through trade associations, to spread vacation schedules throughout the year and to see that vacations begin and end on Tuesdays, Wednesdays, or Thursdays. The ODT director found "no pleasure in giving such advice as this," but he was confident that civilian travelers would realize the need for it when they think of wartime military

and business travel, bearing in mind also that the railroads and bus lines "have been given practically no new equipment and have lost the help of the private automobile."

Would Apply Tax to Federal Barge Lines Traffic

Representative Doughton, Democrat of North Carolina, has introduced "by request" H.R. 2502 to make freight charges paid to the government-owned Inland Waterways Corporation subject to the tax on amounts paid for the transportation of property.

As noted in the *Railway Age* of February 20, page 414, the Bureau of Internal Revenue has ruled that the tax, which became effective last December 1, does not apply to "an amount paid to the United States or any agency or instrumentality thereof." In addition to I.W.C. patrons, this exemption also covers shippers using the Panama Railroad, the Alaska Railroad, and the White Pass & Yukon, which has been taken over by the Army.

Norris City Loads 1,049 Cars in a Day

(*Continued from page 834*)

being shifted into this service, so that it is expected that the average capacity will soon be about 10,000 gallons. Each car makes a round trip in eight to eleven days, depending on the East coast destination. At present about 60 per cent of the crude oil handled through Norris City goes to refineries in the Philadelphia area, 34 per cent to the New York harbor region, and 6 per cent to New England points. If heating oil is moved through the pipeline later a larger proportion will be delivered to the New England district, the ODT pointed out.

Secretary of Commerce Jesse Jones announced April 20 that the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation, had agreed to finance the extension to the harbor area of New York of the 20-inch pipeline now under construction from Beaumont, Texas, to Seymour, Ind., with a branch reaching Norris City. This line will move refinery products, and is expected to have a capacity of 235,000 barrels a day. Operation as far as Seymour is scheduled for October, and it is hoped that construction work will be finished by the end of the year.

Mr. Ickes' policy of depending on increased pipeline capacity, in conjunction with connecting rail and truck service, to meet the oil shortage in the East was thus moved a step forward. His thumbs-down attitude toward the Florida canal project was again emphasized in a letter from J. R. Parten, the PAW director of transportation, which Senator Vandenberg, Republican of Michigan, had printed in the Congressional Record of April 19.

Pointing out that total deliveries of oil in District No. 1, including production within the area, should reach 1,670,000 barrels a day early in 1944, upon completion of pipeline projects already arranged for and further development of rail and other facilities, Mr. Parten cited three reasons for the PAW's attitude toward the canal: (1) The use of critical materials per barrel of oil delivered "would be excessive in comparison to other methods of supply; "(2) Major General Reybold's opinion that the canal could not be finished in less than two years; and (3) even if it could be built, with the necessary floating equipment, within 10 months, oil moved through it would not reach New England before April 1, 1944, by which time "the requirements will be less than the supply, and stocks will already have started to accumulate for the following winter."

Appointment of L. E. Fleming, general manager of the transportation department of the Standard Oil Company of California, as director of transportation for District 5 of the Petroleum Administration for War was announced April 16 by Ralph K. Davies, deputy administrator.

According to an announcement by Secretary Jones, the 175-mile pipeline from Greensboro, N. C., to Richmond, Va., began moving oil at the rate of 30,000 barrels a day on April 23, thus extending to a rail and marine terminal nearer the "petroleum famine" region and the principal war embarkation ports a line originating in the Texas and Louisiana refinery area.

Rationed Foods Allotments to Include Service Men

Ration checks or emergency acknowledgments will no longer be provided by local ration boards for dining cars, station restaurants, or other "institutional users" feeding military or naval personnel on government meal tickets, the Office of Price Administration stated April 20. This change in procedure results from Amendment 15 to General Ration Order No. 5, which alters the basis for determining an institutional user's allotments of rationed foods.

Starting with the second ration period, covering May and June, allotments will be based on information supplied by the institutional user in which he indicates the number of persons served during December, 1942, on government meal tickets, the amount of rationed food served them and the dollar volume of such business. Users who excluded such information from their registration under the OPA order are required to change their registrations to include the necessary data. Local boards will make adjustments in allotments for the March-April ration period to include amounts the user would have received under the revised method, and the additional quantities—minus the amounts provided on ration checks—will be added to the May-June quotas.

Opening of Lakes Ore Traffic Delayed by Cold

Despite efforts to break through thick ice to allow vessels to move on Lake Superior, the opening date of the upper lakes navigation season still was uncertain, the Office of Defense Transportation stated April 17, and it was said to be possible that the annual iron ore movement might not begin before May 1.

As some 8,650,000 tons of ore had been loaded by May 1 last year, operators on the Great Lakes will face a task of great difficulty this season in meeting the goal set by government agencies, which contemplates an all-time record movement of 95 million tons between the upper and lower lakes, the ODT said.

The Strait of Mackinac, between Lake

* * *

C. P. R. Photo

A Mobile Rescue Truck Used by A. R. P. Wardens at Windsor Station, Montreal

Completely equipped trucks of this type and similarly built fire trucks have been placed at strategic points throughout the C. P. R.'s Windsor station for emergency use in case of air attack. In addition to first aid equipment, the truck carries rubber and asbestos gloves, shovels, hatchets, heavy sledge hammer, battery and oil lamps, 6-ft. ladder, cross-cut saw heavy jack, crow-bar and many feet of strong rope and other smaller tools.

Michigan and Lake Huron, was opened briefly early in the month by the ice-breaking efforts of the car ferry Ste. Marie, the ODT added, but another blizzard closed the strait and locked 45 vessels in the ice. It had been planned to move the Ste. Marie to the Soo locks to open the route between Lake Huron and Lake Superior, but the severe weather has made it necessary to keep it on duty at the Strait of Mackinac along with another ferry vessel, it was explained.

Permits for Potato Shippers

Shipments of potatoes from points in Maine by rail or truck have required a permit from the Presque Isle, Me., office of the Food Distribution Administration since Food Distribution Order 49 became effective April 15. The Department of Agriculture in making this announcement pointed out that supplies of potatoes in Maine are estimated to total between 5,000 and 7,000 carloads.

To obtain a permit to ship potatoes, the shipper must first offer to sell them to federal agencies—that is, the Food Distribution Administration and the Army—and the portion of the supply not needed by these agencies will be "released promptly for commercial shipment," the announcement indicated.

New War Transport Movie

A new war transportation movie short was released by the Office of War Information on April 15. It is called "Right-of-Way." It is the second transportation movie put out by O.W.I. This one is, technically, a much better job than the earlier one, which was called "Troop Train"—but that was good too. Your movie theater will probably show this short. It would be a good thing for all railroaders and their friends to see—because in it, the O.W.I. really gives transportation some of the credit due for an excellent and necessary war job.

"Right of Way" tells how American transportation, geared to war, is doing the biggest job in its history in delivering the goods to the battlefronts of the United Nations. Featured in the film is Joseph B. Eastman, Director of the Office of Defense Transportation, who explains in his commentary that the travel inconveniences which the public now suffer are not an evidence of transportation inefficiency, but the very opposite. The transportation machine is working at top efficiency—only it is the war program, rather than civilians, who are getting the benefit thereof.

"Right of Way," opens with a montage account of the troubles civilians are having with their travel. After Mr. Eastman explains the reasons behind this situation the picture then shows transportation in action. A freight train and a truck, both carrying war materials, and a troop train, are heading towards a convoy, at an unnamed port, which is due to sail at dawn. A regular passenger train is sidetracked while the munitions train proceeds. The engineers of the two trains, and the driver of the truck, are shown carrying on to get their trains to the convoy in time. They succeed, with some very good railroad picture-taking as an accompaniment.

Praise for the D. M. & I. R.

The co-operation of the Duluth, Missabe & Iron Range in "virtually stripping itself of motive power" during the winter to "lighten the burden being carried" by roads in the Inter-mountain and Pacific coast areas was commended by the Office of Defense Transportation in a statement made public April 15. The D. M. & I. R. leased 6 locomotives to the Denver & Rio Grande Western, 4 to the Great Northern, 3 to the Western Pacific, and 7 to the Southern Pacific during the off-season period for its iron ore business.

Pullman Sets New Troop Handling Records

Mass troop movements by Pullman in March reached an all-time monthly peak, established a new quarterly record, and brought to more than 10,000,000 the total number of soldiers, sailors, marines and other military and naval personnel moved in the company's sleeping cars since Pearl Harbor, according to George A. Kelly, vice-president of the Pullman Company. Organized military travel by Pullman during the first quarter was practically equal in passenger-miles to total civilian travel in sleeping cars, he said, with troop movements totaling 2,360,000 men, an increase of more than 85 per cent over the first quarter of last year. March's new record was 840,000 troops, as compared with the previous high established last September of 834,000, bringing total movements since December 1, 1941, to 10,041,110.

"While troop movements are requiring an increasing share of our sleeping car facilities, civilian travel also has continued to run at a very high level, keeping every Pullman car employed to the fullest extent," Mr. Kelly reported. "With spring vacations almost at hand and the summer season not far away, the potential traveler should look at the travel picture with the utmost realism. In no event will the troops fail to be taken care of, but essential wartime civilian travelers may have to bear the brunt of lack of consideration on the part of others.

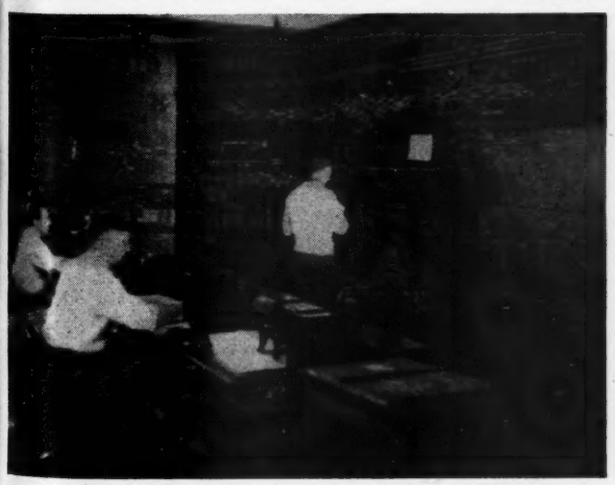
"Our average monthly passenger-mile volume is currently about three times as great as in an average pre-war year," Mr. Kelly continued. "What is true of Pullman is true in general of the railroads, and these figures are a clear indication of how important it is to America's transportation system that non-essential travel be held to a minimum."

NWLB Directs Compliance With ODT Truck Order

The National War Labor Board has directed 27 Minnesota milk distributors to comply with all curtailments of truck mileage ordered by the Office of Defense Transportation, "in such a way as to produce the minimum of hardship to their employees consistent with these orders."

The cases involved opposition of the Milk Drivers and Dairy Employees Union, affiliate of the A. F. of L., to alternate day deliveries, which the companies proposed as a means of meeting the ODT's order of last spring requiring a 25 per cent reduction in truck mileage.

The Board accepted a mediation panel's recommendation that Minneapolis companies and Local 471, "through the newly-created labor-management committee or any other method they may mutually agree upon . . . continually study the problem" and work out plans for necessary curtailment of truck mileage with a minimum of hardship to the employees." In the case of



A Couple of "Stills" From the OWI Movie "Right of Way"—The Gentleman on the Right With the Harried Expression Is ODT's Director of Traffic Movement, Henry McCarthy

St. Paul companies and drivers, where no labor-management committee exists, the Board directed that the parties in negotiations attempt to carry out the ODT order without unnecessary hardship to the employees.

Sliding-Scale Mileage Cuts for Phila.-Atlantic City Buses

The Office of Defense Transportation on April 22 issued Special Order ODT B-42, the first inter-city bus order instituting a sliding-scale schedule of daily round trips on a seasonal basis. The order affects services between Atlantic City, N. J., and Philadelphia, Pa., provided by the Public Service Interstate Transportation Company and Quaker City Bus Company; and it is expected to bring annual savings of more than 600,000 vehicle miles.

In addition to staggering schedules, interchanging tickets, pooling station and ticket facilities wherever practicable, and diverting traffic to each other to relieve overloads and eliminate extra sections, the bus companies' daily services are limited to the following maxima: 30 round trips from October 1 through May 28; 32 round trips from May 29 through June 24; 48 round trips from June 25 through September 15; and 32 round trips from September 16 through September 30.

ODT Chicago Office to Permit Tank Car Short Hauls

In order further to decentralize the work of the tank car service of the Office of Defense Transportation, the fourth field office of that section, a part of the ODT's Division of Petroleum and Other Liquid Transport, has been opened at 209 South Wells Street, Chicago, the ODT announced April 19. The new office will be in charge of Arthur E. Carlson, who has been on the division's Washington, D. C., staff.

This office will handle applications for permits for shipments in tank cars of 200 miles or less in the states of Illinois, Indiana, Michigan, Minnesota, Wisconsin, Iowa, and Missouri, in which region about 25 per cent of all ODT permits for short haul tank car movements are issued. Until the new office is fully organized it will handle emergency permits only, the announcement added.

Mechanical Meeting Chairman — A Correction

The deputy director in charge of locomotives of the Office of Defense Transportation's Division of Railway Transport who presided at the April 16 meeting in Chicago of chairmen of regional mechanical committees is Shannon Kuhn, and not Shannon King, as incorrectly stated in these pages last week.

40.1 Tons Per Car in 1942; New High Record

Railroads of the United States in 1942 attained a new high record in the average number of tons per carload of freight, according to the Association of American Railroads. The average was 40.1 tons per car, 1942 thus becoming the fourth consecutive year in which a new high record has been established. In 1941, the average was 38.2 tons and in 1940, it was 37.7 tons.

"This record," said the A. A. R., " resulted from the country-wide program in which shippers and receivers of freight have united to produce maximum efficiency in the loading of cars and also from General Order ODT No. 18, applying to carload freight, which became effective November 1, 1942, and which requires cars to be loaded heavier than in the past. By increasing the average load per car, greater utilization is being obtained from available equipment."

Materials and Prices

Following is a digest of orders and notices of interest to railroads, issued by the War production Board and the Office of Price Administration since April 17.

CMP symbols—WPB 3174, issued April 14, lists a new set of symbols assigned to Class B products in the CMP plan. These new symbols replace the S-3 designation which was used for B products during the second quarter, but the new symbols will provide a means of determining the uses to which controlled materials will be put. Automotive materials will be designated by symbols from B-1 to B-4; building materials, including bolts, nuts, screws, rivets, electric conduit and conduit fittings, hand tools and hardware, from B-5 to B-7; construction machinery, including cranes, draglines, winches, hoists and track-laying tractors, B-8 and 9 and G-1; dry batteries, G-2; steel drums and barrels, G-4; motors and generators, G-6; pumps, G-7. welding equipment and apparatus, J-1; industrial trucks and tractors, J-5; plumbing and heating equipment, J-8; metal-working machines and tools, K-4 to K-7; railroad car and locomotive accessories, maintenance of way work equipment, signal equipment and transportation equipment, K-8.

Construction — Amendments to Conservation Order L-41, effective April 17, eases restrictions on civilian construction. Formerly, certain minor construction, defined by dollar limits, was unrestricted if no priority assistance was needed for obtaining material. The new amendment retains the dollar limitations but removes the priority restrictions. Where priority assistance is needed for minor construction, either a PD-200, PD-200-c or a PD-105 form is used instead of PD-1A. Preference ratings for various minor construction jobs are automatically assigned under certain blanket preference rating orders, such as CMP Regulation No. 5 and Preference Rating Order P-144. Applicants who come under these regulations need file no other application. The amendment applies to residential construction costing less than $200; industrial construction, not listed on the group of special projects, costing less than $5,000; and construction necessary to protect or repair any structure, or contents, damaged or destroyed by fire, flood, tornado or other disaster.

Fire fighting equipment—General Limitation Order L-43, amended April 16, revising the order issued in February, 1942, controls both new and used fire apparatus, exclusive of repair and maintenance parts. The manufacture of pumpers, tank trucks and aerial ladder trucks is restricted to specified types and sizes, and 500 and 750-gal. pumpers may be manufactured only in accordance with WPB specifications. Purchase orders for pumpers, tank trucks, aerial ladder trucks or auxiliary pumping units for civilian use or for export must be authorized by WPB on Form PD-556, Specific restrictions are placed on the delivery of suction hose, rubber tires and equipment and accessories. No bells may be installed which contain any metal other than steel. Apparatus and equipment in process of manufacture which does not conform to the limitations in the order may be completed to fill purchase orders to which preference ratings had been assigned before April 16.

Hand trucks — Limitation Order L-111, amended April 13, restricts the use of steel, iron, aluminum and other critical materials in the manufacture of hand trucks and related material-handling equipment. The order covers manually propelled trucks, lift trucks, dollies, trailers, etc., used in industrial plants, warehouses, railroad depots and docks. The original order, issued in May, 1942, limited the use of rubber tires on this equipment to essential needs. Purchase orders for new hand trucks and related material-handling equipment or for new parts may be accepted only if they have preference ratings of AA-5 or higher. Repair parts are exempted from but certification must be made that the parts will be used only for repair purposes. Materials prohibited under the new order, with certain exceptions, include ball or roller bearings and cast steel wheels. Repair parts are exempt if parts conforming to the restrictions cannot be used on existing equipment. Equipment in process of manufacture on April 23 or for orders accepted prior to that date is exempted.

Maintenance materials — Preference Rating Order P-142, amended April 14, provides for a steady flow of materials for railroads during the time required for the change over from Preference Rating Order P-88, which was superseded by P-142 on April 5. Under P-142 as originally issued, operators would technically have been unable to extend a preference rating untill they had applied for and received a serial number under the new order. P-142 also requires the use of Form PD-844 in place of Form PD-351, which was used under Order P-88. The amended regulation provides that until a railroad receives its serial number under the new order it may use the CMP allotment symbol MRO-P-88 plus the serial number under P-88. The amendment also provides that to the extent that a railroad continues to receive ratings and authorizations on Form PD-351 for the second quarter of 1943, PD-351 shall be considered equivalent to PD-844.

Rubber — An amendment to Supplementary Order M-15-b, effective April 13, removed restrictions on the destruction of rubber-insulated wire and cable to enable more efficient recovery of the copper content of such materials. The amendment also allows destruction, under special authorization, of certain types of scrap rubber, including tires, tire casings and tire tubes which have no value so far as the rubber conservation program is concerned.

Prices

Fuel oil—Amendment No. 93 to Revised Price Schedule No. 88, effective April 12, extended to other heavy crude oil fields in California the advances ranging up to 25 cents per bbl. in maximum prices of heavy crude petroleum granted March 26 on production from 20 specified fields in that state.

Lumber — Amendment No. 14 to Maximum Price Regulation No. 26 (Douglas fir and other West Coast lumber), effective April 16, raised the ceilings of four grades of Douglas fir boards. The amendment allows an increase of $3.50 per m.b.f. in the price of select merchantable, No. 1 common and No. 2 common boards, to offset the added costs for labor. In the case of No. 3 common boards, the maximum price is raised $1.50.

Price interpretations—Price Interpretations No. 20, issued April 8, digests recent interpretations of price regulations, including Schedule 1—Second Hand Machine Tools; Schedule 12—Brass Mill Scrap; Regulation 13—Douglas Fir Plywood; Regulation 19—South Pine Lumber; Schedule 30—Wastepaper; Schedule 43—Used Steel Drums and Used Steel Pails; Schedule 46—Relaying Rail; Schedule 49—Resale of Iron or Steel Products; Regulation 94—Western Pine and Associated Species of Lumber. Regulation 97—Southern Hardwood Lumber; Regulation 136—Car Movers; Regulation 204—Idle or Frozen Materials Sold Under Priorities Regulation No. 13; Regulation 222—Northern Softwood Lumber; and Regulation 235—Manganese Steel Castings and Manganese Steel Casting Products.

GENERAL NEWS

'42 Capital Outlay Under That of '41

Higher roadway expenditures were offset by cut in equipment items

Capital expenditures for equipment and other improvements to railway property made by Class I roads in 1942 totaled $534,897,000, a decrease of $8,124,000 below those made in 1941, the Association of American Railroads announced this week. Except for the preceding year, capital expenditures were greater than in any year since 1930, when they amounted to $872,608,000.

Of total capital expenditures made in 1942, $349,374,000 were for locomotives, freight-train cars, passenger-train cars and other equipment and $185,523,000 for roadway and structures. Capital expenditures in 1942 for equipment were $18,194,000 below those in 1941 but expenditures for roadway and structures, were $10,070,000 above the preceding year.

Expenditures for freight-train cars in 1942 totaled $201,112,000 compared with $245,713,000 in 1941. For locomotives, Class I roads expended $113,834,000 in 1942, compared with $80,607,000 in 1941. Expenditures for passenger-train cars amounted to $24,075,000 in 1942 compared with $29,544,000 in the preceding year. For other equipment, the railroads in 1942 expended $10,353,000, a decrease of $1,351,000 below the amount spent for that purpose in 1941.

Of the $185,523,000 spent for roadway and structures, more than half was used for improvement of tracks and sidings. For additional track, capital expenditures in 1942 totaled $6,235,000 compared with $3,781,000 in the preceding year. For yards and sidings, expenditures in 1942 totaled $43,330,000 compared with $25,374,000 in the year before, and for heavier rail the railroads spent $33,100,000, or a decrease of approximately $3,000,000 under such expenditures in 1941.

In addition, the railroads spent $5,487,000 for additional ballast and $21,471,000 for bridges, trestles and culverts. Expenditures for shops and engine houses in 1942 amounted to $13,623,000, or a decrease of $300,000 under the year before, and for station and office buildings and other station facilities $10,623,000, which was slightly less than spent for that purpose in 1942. For signals and interlockers including telephone and telegraph lines and automatic train control, they expended $16,261,000 in the past calendar year, or an increase of $2,822,000 above 1941, and for other improvements $35,393,000, which was a reduction of approximately $11,000,000 compared with the year before.

Truckers Ask I. C. C. Not To Cut RRs' L. c. l. Rates

Alleging that many truck operators will be forced into bankruptcy from loss of revenue or traffic, or both, as a result of the reduction in rail freight rates ordered by the Interstate Commerce Commission April 6 in its Ex Parte 148 proceedings, the American Trucking Associations on April 21 petitioned the commission to modify its order so as to permit existing rates on merchandise traffic not moving at carload rates or on carload minimum weight specifications to remain in effect.

Railroads are transporting merchandise traffic at an out-of-pocket loss, the petition asserts, hence the order prescribes unreasonable charges and promotes unsafe, uneconomical and inefficient service.

Injunctions Against T. P. & W. Strikers Reach High Court

In its session April 19 the United States Supreme Court granted *certiorari* in the case of the Brotherhood of Railroad Trainmen versus the Toledo, Peoria & Western, thus opening the way for hearing of arguments following appeal from the lower court's decision that the federal district court had jurisdiction to enjoin striking employees from interfering by violence with the performance of the railroad's duties in interstate commerce, in view of the alleged inability or unwillingness of public officers to protect trains, as well as power to extend the effect of the restraining order beyond a five-day period in spite of provisions of section 7 of the Norris-LaGuardia Act.

March Operating Revenues 36.6 Per Cent Above 1942

Preliminary reports from 89 Class I railroads, representing 82.5 per cent of total operating revenues, made public today by the Association of American Railroads, show that those roads in March had estimated operating revenues amounting to $608,615,475, compared with $445,481,773 in the same month of 1942, or an increase of 36.6 per cent.

Freight revenues of the 89 roads in March, amounted to $473,254,220 compared with $366,941,161 in March, 1942, or an increase of 29.0 per cent. Passenger revenues totaled $96,075,140 compared with $48,740,619 in March, 1942, or an increase of 97.1 per cent.

Pflager Awarded Henderson Medal

Franklin Institute honors him for achievements in making large steel castings

Harry Miller Pflager, senior vice-president of the General Steel Castings Corporation, was awarded the George R. Henderson Medal by the Franklin Institute, at a dinner in Philadelphia on April 21. This medal was established to recognize meritorious inventions or discoveries in the field of railway engineering. The citation indicated that it was for the development of the cast steel one-piece bed for steam locomotives. It is typical, however, of many other improvements devised by Mr. Pflager in the development of the steel castings industry, and particularly in the art of making large and intricate one-piece castings for railroad equipment. Among his other patents of this type may be mentioned those for four-wheel and six-wheel passenger car trucks, with the truck frames cast in one piece; also making the bottom of the locomotive tender tank an integral part of the cast steel tender frame.

Harry Miller Pflager

Mr. Pflager was born in St. Louis, Mo., November 29, 1866. He attended the public school in St. Louis and the Manual Training School of that city. While attending the latter school and while a student in mechanical engineering at Washington University, he worked for the Pullman Company during vacations and week-ends.

He was persuaded to take a permanent position with the Pullman Company in Chicago, before completing his university course.

He remained with the Pullman Company until 1901, advancing from draftsman to mechanical inspector at Chicago, assistant superintendent of the shops at St. Louis, chief inspector of the Pullman Company, and mechanical superintendent. He was vice-president and general manager of the American Clock Company from 1901 to 1903 and became assistant vice-president of the American Steel Foundries in 1903. The following year he became associated with Clarence H. Howard, as senior vice-president, in the founding of the Commonwealth Steel Company. He has continued in that capacity with the Commonwealth Steel Company and its successor, the General Steel Castings Corporation. Recently he has worked on the development of the cast armor one-piece top hulls for combat tanks, which have been perfected by the engineers of the General Steel Castings Corporation.

Mr. Pflager has always taken a keen interest in the welfare and development of young men, not alone in his own organization, but in the community at large. He has been active in the Y. M. C. A. and is a trustee of Iberia College, Iberia, Mo., an institution established for the farm boys of the Ozark Mountain districts. He is also a trustee of Drury College of Springfield, Mo.

Pension Act Amendment

Senator Davis, Republican of Pennsylvania, has introduced S. 1010 to liberalize the survivor-benefit provisions of the Railroad Retirement Act.

C. & S. E. Depreciation Rates

Equipment depreciation rates prescribed recently by the Interstate Commerce Commission for the Colorado & South Eastern were inadvertently omitted from the item reporting issuance of the order which appeared in the *Railway Age* of April 10, page 734. The order prescribed rates of 2.27 per cent for steam locomotives and 3.85 per cent for freight-train cars.

Equipment on Order

Class I railroads on April 1, had 20,712 new freight cars on order, the construction of which had been authorized by the War Production Board, according to the Association of American Railroads. On the same date last year, they had 69,515 on order.

The April 1 total this year included 11,605 hopper, 7,459 gondolas, 1,645 flat, and three plain box cars.

The Class I roads also had 586 new locomotives on order on April 1, compared with 930 on the same day in 1942. The former figure included 392 steam, 12 electrics and 182 Diesel-electrics compared with 426 steam and 504 electrics and Diesel-electrics one year ago.

Class I roads put 4,657 new freight cars in service in the first three months of 1943, compared with 27,263 in the same period last year. Those installed in the first quarter of 1943 included 1,662 hopper, 2,008 gondola, 801 flat, 135 automobile box, 24 plain box and 27 miscellaneous freight cars.

They also put 159 new locomotives in service in the first three months this year, of which 125 were steam, six electric and 28 Diesel-electrics. New locomotives installed in the same period last year totaled 179, of which 78 were steam and 101 were electric and Diesel-electric.

Application of Freight Tax

The Finance, Accounting, Taxation and Valuation Department of the Association of American Railroads has issued Supplement No. 5 to its November 9, 1942 circular relating to the application of the tax on amounts paid for transportation of property. The supplement, dated April 15, brings the circular up to date with respect to current Bureau of Internal Revenue rulings on the treatment of the tax on movements of unprepared coal for coking, on the exemption from the requirement of filing a temporary exemption certificate (Form 798) in the case of certain export traffic, and other technical interpretations.

Northwest Shippers Advisory Board Meeting April 20

Col. J. Monroe Johnson, commissioner of the Interstate Commerce Commission, Washington, D. C., addressed the members and guests of the Northwest Shippers Advisory Board at a luncheon in the Elks Club at Fargo, N. D., on April 20. The meeting was also addressed by R. E. Clark, manager of the Closed Car section, Association of American Railroads, on the National Car Supply and General Railroad Service. At the meeting, reports of committees were read on proposed legislation affecting shippers and railroads; on further effort in unloading cars in the shortest possible time; on efforts being made to eliminate waste of transportation by the proper marking and handling of l.c.l. freight; on the estimated car requirements for the second quarter of 1943 and on estimated business conditions for the second quarter of 1943 in the four states (Minnesota, North Dakota, South Dakota and Montana) comprising the Northwest Board territory. A report was also submitted on the April "Perfect Shipping Campaign" and a 15 minute talkie-movie "War Time Freight" was shown through the courtesy of the Northern Pacific, depicting the Perfect Shipping Month Campaign objectives.

Waterways Again in Service

Resumption of navigation on the upper Great Lakes about three weeks later than last year will mark the last step in the revival of seasonal activities on inland waterways, reviewed by Joseph B. Eastman, director of the Office of Defense Transportation, in a statement made public this week.

Operations on the upper Mississippi river as far as Minneapolis, Minn., were resumed early in the month, he said, and on the lower Great Lakes as well. Virtually all open top barges available on the Mississippi and Ohio rivers are now in use as a result of a heavier volume of coal and structural steel shipments, though the traffic continues to be preponderantly northbound, he added. Coal from mines in southern Illinois is moving to the Twin Cities and via the Illinois River to Chi-

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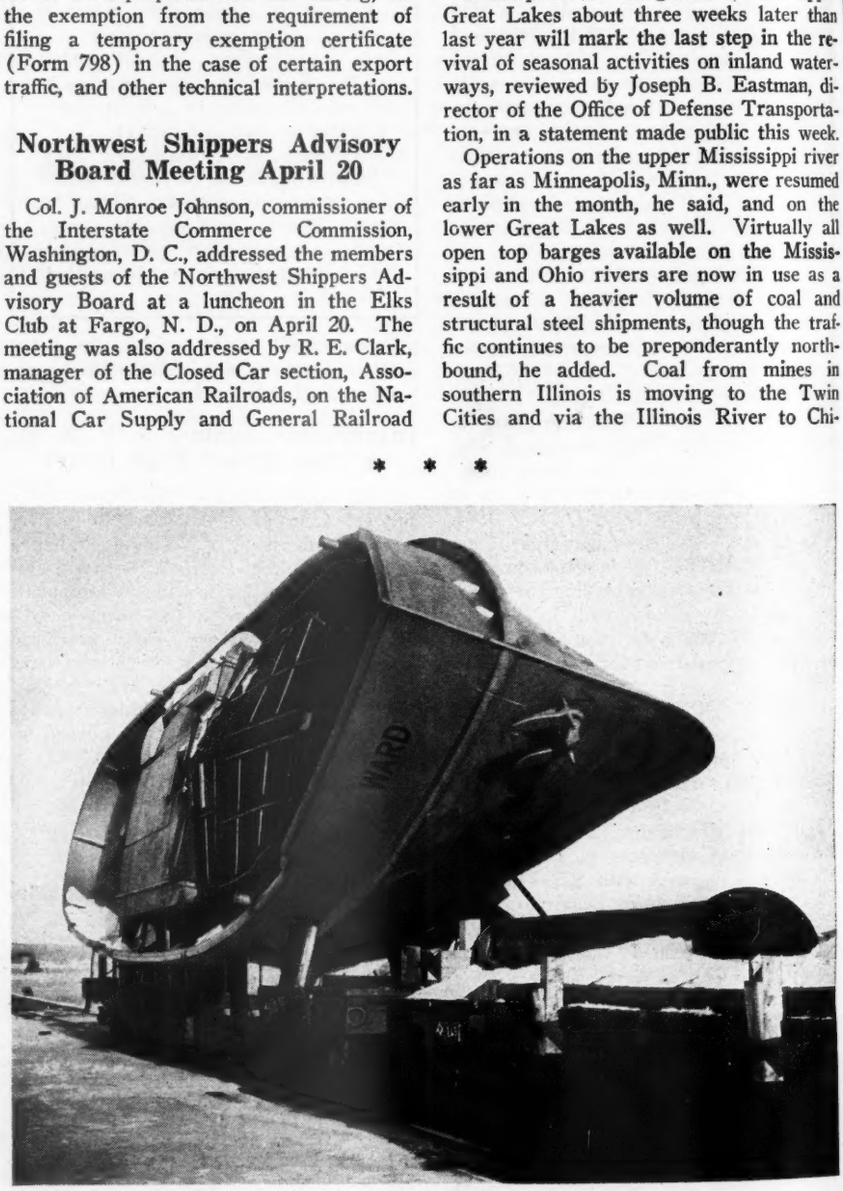


C. N. R. Photo

A Problem for the C. N. R. Operating Department

Two Canadian National flat cars were used to ship this 60-ft. tugboat weighing 47 tons to an eastern Canadian port. The boat had to be shipped on its side and still presented a clearance problem. It got through one bridge, for instance, with one inch to spare.

cago, while other barge operations handling coal in substantial volume serve New England ports, either from rail terminals on New York harbor or from the Norfolk, Va., area.

Traffic on the Gulf-Intracoastal Waterway has increased some 200 per cent over last year, and about 400 per cent over the business handled two years ago, according to Mr. Eastman. While petroleum moving by this route toward the Atlantic seaboard accounts for most of this increase, there is a larger movement also of sulphur and iron and steel products, the ODT statement added.

Car Ferry Withdrawal Leads to I. C. C. Service Order

Because the War Shipping Administration, at the request of the Office of Defense Transportation, has requisitioned the car ferry operating between Mackinaw City, Mich., and St. Ignace to be used as an ice breaker to aid in opening the Great Lakes for navigation, Division 3 of the Interstate Commerce Commission has issued its Service Order No. 118, effective for 30 days from April 14, directing the Pennsylvania, New York Central, Michigan Central and Duluth, South Shore & Atlantic to forward traffic between those points by the most available routes.

Storage Charges at Baltimore

Reporting on the Baltimore, Md., phase of its No. 28420 investigation of "Storage Practices of Railroads at North Atlantic Ports," the Interstate Commerce Commission has found that the Baltimore & Ohio, Western Maryland, Canton, and subsidiary warehouse companies of the first two have been providing commercial storage services for certain shippers of woodpulp and sugar at non-compensatory rates which result in violations of the Interstate Commerce Act. An order was entered requiring the three roads to cease and desist from the "unlawful practices."

Because the estimated costs of the storage of woodpulp on the Baltimore Piers of the Pennsylvania "are greatly in excess of the charges of this respondent for such service," the commission "shall expect" the P. R. R. "to revise its charges . . . to the same extent and at the same time as the charges of the other respondents for like services are revised pursuant to the order herein." The commission also stated that the Canton Company, parent corporation of the Canton, was providing primarily for the benefit of the latter certain storage and handling services on sugar "at less than cost," and on other commodities at rates less than those of the Canton. Under such a set-up, the Canton "violates the spirit, if not the letter, of sections 2 and 6(7)," the report went on, adding that "prompt action should therefore be taken to revise rates and charges for these services so as to bring them to a compensatory level."

Commissioner Mahaffie wrote a brief concurring-in-part expression which was subscribed to also by Commissioner Patterson. For reasons stated in his partial dissent in the New York warehousing case, 216 I. C. C. 291, 356, Mr. Mahaffie did not agree "with some of the principles employed to determine the cost of rendering the services in question." Nor did he consider it a sound principle "that a carrier service may not lawfully be afforded at less than full cost including depreciation in such situations as those here reflected." General application of the full-cost theory, Mr. Mahaffie added, "would terminate a great many carrier operations heretofore considered essential."

Freight Car Loading

Loadings of revenue freight for the week ended April 17 totaled 780,908 cars, the Association of American Railroads announced on April 22. This was a decrease of 8,110 cars, or 1.0 per cent, from the previous week, a decrease of 65,597 cars, or 7.8 per cent below the corresponding week last year, and an increase of 72,115 cars, or 10.2 per cent, above the comparable 1941 week.

Loading of revenue freight for the week ended April 10 totaled 789,018 cars and the summary for that week, compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loadings

For Week Ended Saturday, April 10

District	1943	1942	1941
Eastern	160,802	168,381	148,125
Allegheny	177,033	180,176	143,208
Pocahontas	57,886	56,974	17,544
Southern	124,805	129,390	107,636
Northwestern ..	81,522	110,684	109,456
Central Western	115,136	109,867	103,636
Southwestern ..	71,834	58,624	50,203
Total Western Districts	268,492	279,175	263,295
Total All Roads	789,018	814,096	679,808
Commodities			
Grain and grain products	41,959	33,861	33,696
Live stock.....	13,765	11,117	10,788
Coal	173,831	160,611	31,592
Coke	14,673	13,755	9,415
Forest products	42,659	46,868	39,282
Ore	21,196	51,007	45,951
Merchandise l.c.l.	99,519	132,367	161,667
Miscellaneous ..	381,416	364,510	347,417
April 10.....	789,018	814,096	679,808
April 3.....	772,133	829,038	683,402
March 27.....	787,360	808,286	793,803
March 20.....	768,134	796,654	769,984
March 13.....	769,042	799,356	759,607
Cumulative Total, 15 Weeks....	11,221,066	11,799,336	10,750,195

In Canada.—Car loadings for the week ended April 10 totaled 66,439 as compared with 65,167 for the previous week and 62,907 for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
April 10, 1943.....	66,439	40,251
April 3, 1943.....	65,167	39,715
March 27, 1943.....	66,989	40,034
April 11, 1942.....	62,907	30,767
Cumulative Totals for Canada:		
April 10, 1943.....	906,585	545,743
April 11, 1942.....	917,657	476,306
April 12, 1941.....	814,153	432,326

Swiss Railways Carry Heavy Load Despite Difficulties

The Swiss Federal Railways have continued with their electrification program, despite the war, and at present 94 per cent of their gross traffic moves over electrified lines. On roads still operated by steam, it has been necessary to curtail schedules and to ration the use of coal, all of which must be imported. In spite of these measures, however, the use of coal in 1941 was not materially less than in 1936, due to the tremendous increase in traffic. At present, because of the blockade, all coal is received through Germany and it may be necessary to restrict its use still further.

Consumption of electrical energy for all purposes in 1941 increased 50 per cent, as compared with 1936—due partly to the increased railway demand, and partly to the increased use of electricity in industry. Until the beginning of the winter season 1941-42, it was possible to handle this increase without serious difficulties. The prolonged drought experienced at that time, however, made it necessary to institute restrictive regulations which resulted in a saving of 200,000 kwh. per day over the 1941 figure.

The Swiss railways have experienced some difficulty in securing materials for the maintenance of their equipment and right-of-way. From 60 to 120 tons of lubricants per month are required for the government-operated railways. Since early in 1940 stocks of this material have been very low. In 1939 steel rails could still be imported. However, in 1940 and 1941 this was no longer possible. The requirements of the Swiss railroads are 12,000 to 15,000 tons of rail per annum. In the past few months they have been able to import a few hundred tons—meanwhile they have had to draw on their reserves. The situation with regard to metal ties presents similar difficulties—imports having stopped altogether in 1939. Track maintenance has, therefore, suffered. As a compensatory measure, roadbeds have been given extra care and trains have been decelerated to prevent accidents.

Electrification requires the use of quantities of iron and copper, both scarce commodities on the Swiss railways. As a result, superstructures on newly electrified lines have been constructed of wood, while copper is temporarily being replaced by steel and iron.

Collision Was Consequence of Inaccessible Brake Valve

A rear-end collision on the Pennsylvania between two passenger trains within interlocking limits 0.6 mile north of the station at Wilmington, Del., at 11.35 p. m. on February 23, in which 101 persons, including 87 passengers, were injured, was due, according to the Interstate Commerce Commission report prepared under the direction of Commissioner Patterson, fundamentally to "failure properly to control speed of following train in accordance with signal indication," but more particularly to placing the valve of the back-up hose on a train in backward motion in an inaccessible position below the level of the vestibule trap door.

The accident occurred when the rear end of a standing 11-car train, No. 457 southbound from Philadelphia, Pa., to Cape Charles, Va., was struck by a 2-car extra train moving backward at about 20 m. p. h. The two cars were to be attached to the standing train, and the conductor on the moving train was keeping a lookout from a vestibule door when he observed the marker lights of No. 457 some 650 feet

ahead. The car was equipped with a valve on the end of a back-up hose, and this hose was hooked to the vertical handhold on the post of the vestibule door where the conductor stood, but in such a position that he was unable to reach the valve. When he discovered this, the conductor entered the car in an attempt to open the conductor's valve, but the colllision occurred before he could reach it.

Rules governing operations at the point of the accident provided for movements in either direction on the main tracks when authorized by signal indication, and did not require flagging protection against following movements. In this case the 2-car train was moving under a proceed-at-restricted-speed indication, under which it was required to be prepared to stop short of a train or obstruction, and not to exceed a speed of 15 m. p. h. While the speed was not controllled in accordance with the signal indication, the commission report pointed out, if the valve of the back-up hose had been attached to the front endgate where the conductor could have reached it the train could have been stopped in time to avert the accident.

Pullman to Build New Car in Quantity After the War

The favorable public reception accorded the Duplex-Roomette sleeping car, which the Pullman Company has operated in experimental service during the last year, has led Pullman Inc., to make detailed plans for quantity production of this type of car after the war, David A. Crawford, president, told the company's stockholders at a meeting in Wilmington, Del., on April 21.

"It's quite a commentary," Mr. Crawford told the stockholders, "on the useful part played by the Pullman group of manufacturing and car operating companies, in the conduct of necessary features of wartime transportation, that the adverse opinion in the government anti-trust suit against the company comes just at the time when the railroads of the country, acting through the Association of the American Railroads, have asked The Pullman Company, as the sleeping car operating unit of the Pullman system, to undertake the contract to lease and operate 1,200 special type troop sleeping cars which the government's Defense Plant Corporation has agreed to have built and equipped, to furnish needed additional facilities for the transportation of organized bodies of the armed forces. In open competition just conducted by the Defense Plant Corporation, Pullman-Standard Car Manufacturing Company was the low bidder for the job of building these cars."

The Pullman president predicted that there will be a large post-war demand for new railway equipment and revealed that both the Pullman Company and Pullman-Standard, subsidiaries of Pullman Incorporated, are engaged in research designed to secure reduction in manufacturing costs and lowering of maintenance expense of railway equipment of all types. Engineering studies, he added, are constantly underway also in connection with new materials now being developed, particularly the alloys of steel, aluminum and magnesium.

The Duplex-Roomette car, as a sleeping car now in experimental operation is known, was made before war necessitated a switch of equipment, materials and manpower to arms production. It has been in regular service since April, 1942, and has been filled to capacity on nearly every trip, Mr. Crawford said. He pointed out that the new car is currently earning at the rate per annum of about three times the average of cars of all types in the Pullman system, showing great popularity with overnight travelers between Chicago and Washington. Pullman's research department, he said, is giving special attention to refining and improving every detail of the cars designed, and these improvements will be incorporated in post war units.

Mr. Crawford also reported that new coach-sleeper cars have been operated in tourist class service throughout 1942 and, by reason of large passenger-carrying capacity, have proved very useful. He expressed the hope that at the close of the war the railroads will co-operate in the extension of an economical class of sleeper service with equipment of this type.

Reverses Division 4 in Water Carrier "Grandfather" Case

Reversing its Division 4, the Interstate Commerce Commission has ruled that water carriers may obtain "grandfather-clause" certificates covering operations to points where their barges are towed by another company under arrangements which give the claimant carrier no authority to direct or control the performance of the towing operations. The ruling came in a report of the commission on reargument in the No. W-104 proceeding involving applications of the Union Barge Line Corporation of Pittsburgh, Pa.; it was a seven-to-three decision, accompanied by a dissenting expression from Commissioner Mahaffie who was joined by Commissioners Miller and Rogers.

The prior report by Division 4, noted in the *Railway Age* of May 16, 1942, page 958, gave Union certificates covering various operations on the Mississippi and Ohio rivers and their tributaries. It refused certificates covering operations on the Gulf Intracoastal waterway and on the Mississippi between Cairo and St. Louis where Union's barges had been towed by tugs or other companies. The latter ruling is now reversed by the full commission, as also is Division 4's finding that the certificates issued Union should be made subject to minima of not less than 200 tons per shipment. Division 4 sought to justify this limitation with a finding that Union's holding out had been subject to a minimum tender of 200 tons; but the commission held that such conditions "need not be considered" in determining the scope of a carrier's "grandfather" operating rights.

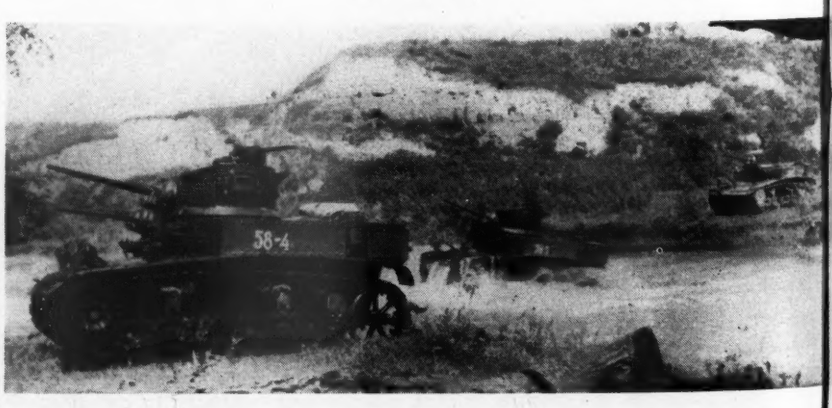
The barge-towing issue was disposed of in the commission's discussion of Union's claims to rights on the Gulf Intracoastal waterway, where its barges have been towed by Coyle Lines, an affiliate of the DeBardeleben Coal Corporation. Union relied on section 303(f) (2) of Part III of the Interstate Commerce Act which stipulates that the provisions of that part shall not apply "to transportation by water by any person . . . for a . . . water carrier subject to this part . . . in the performance of floatage, car ferry, lighterage, or towage but such transportation shall be considered to be performed by such carrier . . . as part of, and shall be regulated in the same manner as the transportation by . . . water to which such services are incidental."

Division 4 ruled that not every towage is thereby exempt, but only such as is performed under contract or agency for another common carrier. It found that the towage here involved did not qualify, but rather that it was transportation performed by the towing company as a connecting carrier.

The full commission's contrary view was based on these considerations: The transportation was under through rates fixed by Union without any agreement, negotiation or consultation with Coyle Lines as to the amount of their division; the contract of the shipper was with Union for the entire transportation; Union collected the freight charges for the entire transportation, and there is no evidence that the shippers or consignees ever dealt with Coyle Lines with respect to those charges; Union supplied its own motive power for the movement of the barges over certain waterways, and contracted with Coyle Lines for towage of the barges on the canal.

"Such arrangements," the commission added, "are recognized as proper by section 303(f) (2)"; and it went on to cite what it regarded as a pertinent Supreme Court decision in a railroad case—*Missouri Pa*

* * *



Some A. C. F. Tanks Helping the Russians Chase the Axis Out of the Caucasu

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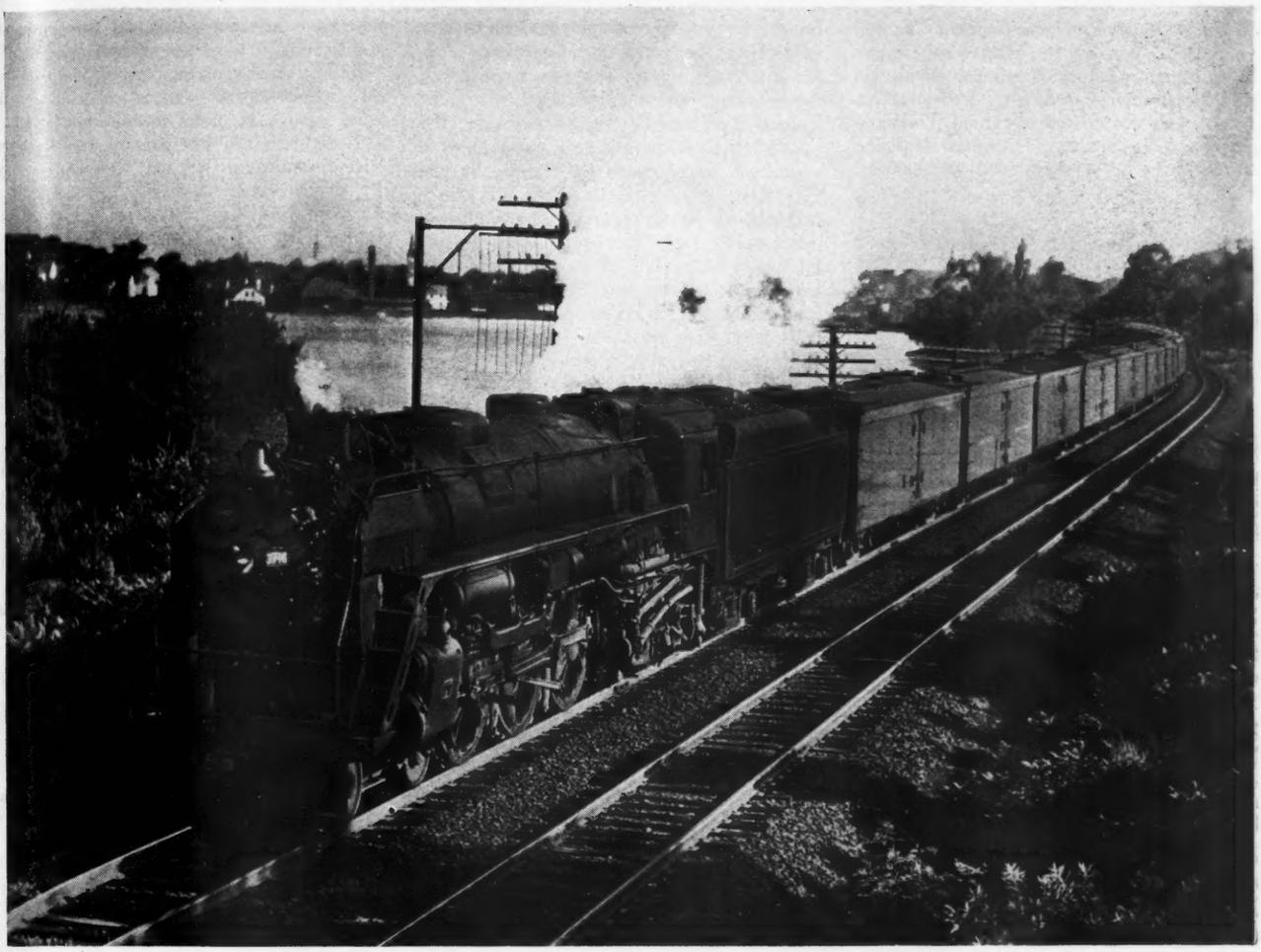

MODERN POWER IS PROVING ITSELF

Today everything that can haul a car has been pressed into service to keep war-time traffic on the move.

But the contrast in performance between the newer locomotives and the old-timers has convinced railroad men of the desirability of ordering modern power when it can be obtained. Economic post-war transportation will demand up-to-date locomotives.

LIMA LOCOMOTIVE WORKS — LIMA LOCOMOTIVE WORKS INCORPORATED — INCORPORATED, LIMA, OHIO

R. Co. v. Reynolds-Davis Grocery Co., 268 U. S. 366. Because the facts were similar as to the towage performed for Union on the Mississippi between Cairo and St. Louis, the commission granted Union a certificate there also. Dissenter Mahaffie would have affirmed Division 4's findings. He was of the opinion that the towing companies received the traffic as a connecting carrier and that Union acquired no "grandfather" rights with respect to such traffic.

Representation of Employees

On the ground that the application presented no dispute as to what union is the authorized representative of train dispatchers on the Delaware & Hudson, the National Mediation Board after an investigation and hearings has dismissed the American Train Dispatchers' Association's request that the board designate a representative.

The case particularly involved three positions as operators of a c.t.c. machine installed at Albany, N. Y., in 1936. Three extra dispatchers were assigned to these positions. At that time neither the telegraphers nor the dispatchers had any agreement with the D. & H. governing the assignment of work. In 1938, however, an agreement was concluded between the road and the Order of Railroad Telegraphers incorporating these positions, even though the men filling them continued to receive pay at a higher rate than the agreement provided. In 1939 the road's dispatchers became organized, whereupon the union insisted that the Albany c.t.c. operators be included in the dispatchers' agreement, while the management contended that they already were included in the telegrapher's agreement.

Finding that the dispute before it essentiallly involved the propriety of including the three Albany positions in the telegraphers' agreement, the board pointed out that, since similar positions at other points were so included, and since the dispatchers' 1940 agreement had acknowledged that the Albany positions were so covered, there was nothing improper in the situation, and no dispute within the provisions of the Railway Labor Act calling for its determination.

Following an election, the board designated the International Brotherhood of Electrical Workers, A. F. of L., to represent telephone maintainers on the Erie, and Railroad Yardmasters of America to represent yardmasters on the Missouri Pacific. These employees had not been represented by any organization.

By a vote of 89 to 56 the clerical, office, station and storehouse employees of the Charleston & Western Carolina chose the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees as their representative instead of the C. & W. C. Clerical Employees Association.

Patrolman (wharf watchmen) in the police department of the Galveston (Tex.) Wharves selected the National Council of Railway Patrolmen's Unions, A. F. of L., as their representative after the board found that they were employees of a carrier subject to the Interstate Commerce Act, and therefore to the Railway Labor Act, even though the management had challenged the board's jurisdiction on the ground that the employees in question were appointed, as provided by statute, by the City Commission of Galveston. Issuance of authority to make arrests by a city or other public body does not nullify the relationship of patrolmen as employees of a carrier, the board pointed out, and the men involved were carried on the carrier's payrolls and reported by it to the Railroad Retirement Board as employees, so that its jurisdiction would extend over them, it concluded.

Following an investigation by a mediator, the United Steelworkers of America withdrew an application for the board's services in an alleged dispute involving representation of clerical, office, station and storehouse employees of the River Terminal (Cleveland, Ohio), the board announced.

Supreme Court Refuses Review Of Rail Reorganizations

The status of pending railroad reorganization plans was further clarified by the United States Supreme Court's action April 19 in refusing to review cases involving the Chicago & North Western and Akron, Canton & Youngstown plans approved by the Interstate Commerce Commission, thus in effect upholding the lower courts' confirmations of these plans.

While the court's denials were made without comment, its decisions in the Western Pacific and Chicago, Milwaukee, St. Paul & Pacific cases, recently announced and reported in *Railway Age* of March 20, page 544, evidently were regarded as adequate to dispose of the similar issues raised in the later cases. On the same day the court denied formal motions for reopening the Western Pacific cases.

Congressmen Appraise Study Board's Members

The continued interest of certain members of Congress in the interterritorial rate question was indicated last week when Representative Spence, Democrat of Kentucky, through an extension of remarks in the Congressional Record called to the attention of the House the recent summary report on that subject of the Board of Investigation and Research (reviewed in *Railway Age* of April 3, page 664), "in the hope that some legislative policy may be formulated by which equal justice may be substantially done to the shippers of freight in the various class-rate territories of the United States."

At the same time Mr. Spence obtained authority to have published in the appendix to the Record of April 15 a letter from Robert E. Webb, vice-chairman of the board, commenting on the conclusion developed in the board's forthcoming complete report that "there is no sound reasons" why regional differences in class rates should be continued, "since the existing differences in class rate levels are not justified by cost and transportation conditions, . . . regardless of the degree to which they may have affected industrial development in different parts of the country."

Of Mr. Webb, "a citizen of Kentucky," Mr. Spence said, "I know he desires that equal justice be done to all and is sympathetic with the interests of the South."

Representative Bryson, Democrat of South Carolina, was less warm in his praise of the board's chairman, Nelson L. Smith, however, in reviewing the "inequitable situation which exists in the rate structure" in a 15-minute speech in the House April 19 in which he appealed for "a green light to insure wider development of the South." On April 16 Mr. Bryson introduced a bill (H.R. 2519) to amend the Interstate Commerce Act to give effect to the board's recommendation of a legislative statement of policy requiring a uniform classification and class rate scale.

"I intend no criticism of Mr. Smith," remarked Mr. Bryson, "when I remind the House that it so happens that he hails from the New England area, which has been in position to benefit most from the long-standing discriminatory rate structure." Mr. Smith, who is from New Hampshire, filed a dissenting report disagreeing with the board's majority, Mr. Webb and C. E. Childe of Nebraska, in the recommendation of legislative action, though agreeing, the Congressman pointed out, with their "general conclusions."

Mr. Bryson, calling for "complete unity" and the removal of "any and all barriers to full utilization of our productive resources wherever they may be located," directed the House's attention also to the 28300 and 28310 proceedings pending before the Interstate Commerce Commission, to the recent "elaborate report" on "regionalized freight rates" prepared by the Tennessee Valley Authority (also outlined in *Railway Age* of April 3, page 687), and to the "well-considered report prepared by a group of hard-headed and successful business men, spokesmen of the private enterprise system" embraced in the preliminary observations of the post-war committee of the National Association of Manufacturers—all of which, he said, indicate that greater industrial development of the South and West would benefit not those sections alone, but the entire country.

Recommends Permit for Acme

Examiner R. W. Snow has recommended in a proposed report that the Interstate Commerce Commission issue to Acme Fast Freight, Inc., a permit under the Interstate Commerce Act's Part IV covering freight-forwarder operations between all points in the United States. The proceeding is docketed as No. FF-72.

Norfolk & Western's Part in "Perfect Shipping" Campaign

The Norfolk & Western organized 18 committees at strategic points along its line to promote the Perfect Shipping and Careful Handling campaign this year. During the month of April these committees, which are composed of representatives from the station and yard freight and car handling forces, are holding joint meetings weekly under the chairmanship of a division offi-

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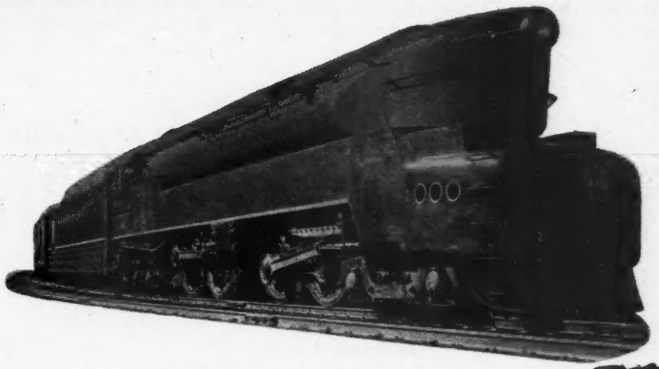
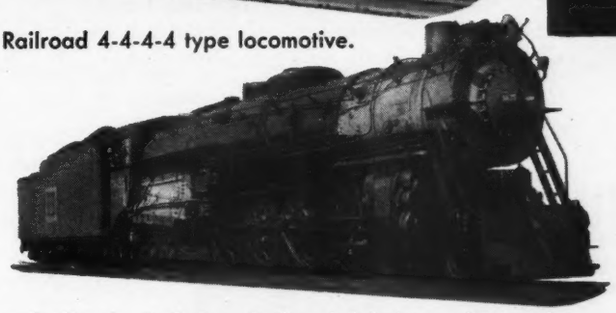
THESE LOCOMOTIVES ARE EQUIPPED WITH...

THE FRANKLIN SYSTEM OF STEAM DISTRIBUTION

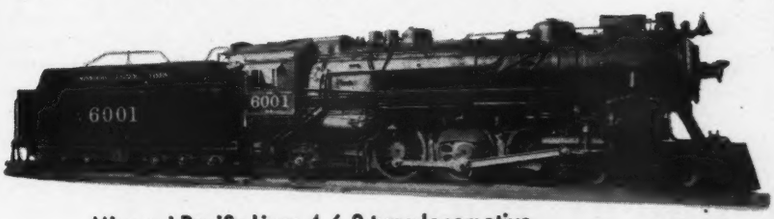


Pennsylvania Railroad 4-4-4-4 type locomotive.



Chicago, Burlington & Quincy Railroad 4-8-4 type locomotive.

Pennsylvania Railroad K4s, 4-6-2 type locomotive.



Missouri Pacific Lines 4-6-2 type locomotive.

Through the application of The Franklin System of Steam Distribution to new or existing locomotives it is possible to obtain the maximum productive power of the boiler.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

cer. Careful handling in all its phases is the topic of discussion and, in their daily contacts with fellow-workers, these representatives try to impress upon them the importance of seeing that all freight is "Shipped Right for Victory."

To further emphasize the perfect shipping theme, a sound-motion picture entitled "Wartime Freight"—sponsored by the Shippers Advisory Boards, is being shown during the month of April at 17 Better Service Club meetings over the entire system and to freight-handling employees and others at the larger stations. The picture has also been shown at a few shipper and traffic club meetings.

I. C. C. Service Order Modified

The provisions of Interstate Commerce Commission Service Order No. 104, under which railroads may furnish refrigerator cars instead of box cars for westbound carload movements destined to points in certain states in the Pacific coast area, have been modified by Amendment No. 1 to the order to extend the same authority to shipments from points in Utah to points in Nevada and California. The amendment is effective April 29.

Construction

DENVER & RIO GRANDE WESTERN.—The Utah State Road Commission has awarded a contract, amounting to $132,976, to the Gibbons & Reed Company, Salt Lake City, Utah, for the construction of a concrete T-beam crossing over the Denver & Rio Grande tracks in Salt Lake City and a concrete T-beam bridge over the Jordan river.

WAR DEPARTMENT.—The U. S. Engineer office, Los Angeles, Cal., has awarded a contract, amounting to more than $100,000 and less than $500,000, to H. B. Nicholson, Los Angeles, for grading and railroad trackage in California. The U. S. Engineer office, Mobile, Ala., has awarded a contract, amounting to less than $50,000, to Royce Kershaw & Co., Montgomery, Ala., for the construction of railroad track in Alabama. The U. S. Engineer office, Savannah, Ga., has awarded a contract amounting to less than $50,000, to the Espy Paving & Construction Company, Savannah, Ga., for the construction of a road and railroad.

Equipment and Supplies

PASSENGER CARS

THE DEFENSE PLANT CORPORATION has placed an order with the Pullman-Standard Car Manufacturing Company for the construction of 1,200 special type troop sleeping cars.

Supply Trade

William H. Worrilow, president of the Lebanon Steel Foundry, has been elected a director of the **Armstrong Cork Company**

The Army-Navy "E" was awarded the employees and management of the **Chicago Flexible Shaft Company,** Chicago, for high achievement in the production of war materials on April 22.

Young & Greenawalt, drainage specialists, East Chicago, Ind., will open a Chicago office at 332 South Michigan avenue on May 1. **P. J. Spears** will be in charge of the new office.

D. S. Ellis, chief mechanical officer of the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette, has resigned, effective May 1, on which date he becomes vice-president in charge of manufacture of the **Lima Locomotive Works. Inc.,** with headquarters at Lima, Ohio. Mr. Ellis was born at Warwick, N. Y., on January 25, 1897, and attended the Warwick High School. In 1916 he became a clerk in the auditor's office of the Lehigh & Hudson River and in 1917 a clerk in the office of the auditor of freight accounts in the New York Central. During a period from 1917 to 1918 he was a machinist and acting enginehouse foreman. In 1918 he became a draftsman, serving in this position and as an engineer, calculator, designer and traveling engineer until 1924. In that year Mr. Ellis was appointed assistant engineer of motive power, New York Central Lines. On May 1, 1929, he left the employ of the New York Central and accepted the position of eastern district manager and, subsequently, manager of the Railroad Division of the Worthington Pump & Machinery Corporation. On October 1, 1932, he resigned to become engineer of motive power on the Advisory Mechanical Committee of the Chesapeake & Ohio; Erie; New York, Chicago & St. Louis, and Pere Marquette, with headquarters at Cleveland, Ohio. In January, 1936, Mr. Ellis was appointed mechanical assistant to the vice-president of the C. & O.; N. Y. C. & St. L., and P. M., and in July, 1936, he became chief mechanical officer.

D. S. Ellis

The Army-Navy "E" award for excellence in the production of war material was presented on April 16 to the Eddystone, Pa., plant of the **Baldwin Locomotive Works.**

Carl T. Mead and **T. L. Capps** have been appointed resident manager and service sales engineer, respectively, for the **Standard Stoker Company, Inc.,** with headquarters at the company's Montreal, Que., office.

The East Chicago, Ind., plant of the **General American Transportation Corporation,** Chicago, has been awarded the Army-Navy "E" for high achievement in the production of high-explosive shells, landing mats and other war products. Presentation of the award was made at a gathering in the plant on April 19.

The Army-Navy production award was presented to the **Whiting Corporation,** Harvey, Ill., and its employees, at ceremonies held on April 20. The award was presented by Col. John Slezak, deputy district chief of the Chicago Ordnance district, and was accepted by Howard D. Grant, president of Whiting. Gen. T. S. Hammond, head of the Chicago Ordnance district, also spoke during the ceremonies.

John Ballantyne, vice-president in charge of operations of the **Philco Corporation,** has been elected president of the company, succeeding **James T. Buckley,** who has been elected to the newly-created office of chairman of the company's Executive Committee. **M. W. Heinritz,** general manager, has been appointed vice-president in charge of the company's Storage Battery division, and **Charles F. Steinruck, Jr.,** assistant secretary, was elected secretary, to succeed the late **George E. Deming.**

John A. Stephens, director of industrial relations of the **United States Steel Corporation** of Delaware, has been promoted to vice-president, industrial relations. Mr. Stephens, a native of Albany, N. Y., was graduated from Columbia University. Prior to his association with the United States Steel Corporation, Mr. Stephens served as vice-president or president of several other industrial companies and was president of Research, Inc. From 1934 to 1938 he was manager of industrial relations of the Carnegie-Illinois Steel Corporation, becoming director of industrial relations of the United States Steel Corporation in 1938. In February, 1942, he was elected also a member of the board of directors and of the executive committee of the corporation.

OBITUARY

Clarence E. Postlethwaite, retired assistant vice-president of the Pressed Steel Car Company, Inc., at New York, died at his home in New Rochelle, N. Y., on April 15 at the age of 77. Mr. Postlethwaite was born in Mount Union, Pa., and began his career as rodman for the Pennsylvania. Later he joined the Norfolk & Western

News Department continued on next left-hand page

FUEL

a strategic material

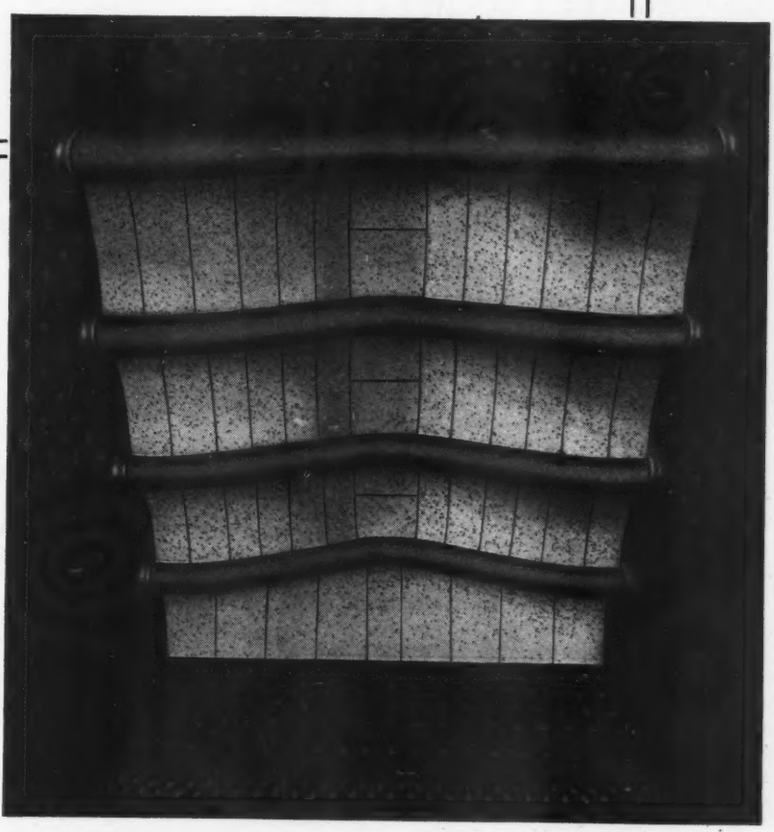
CONSERVED

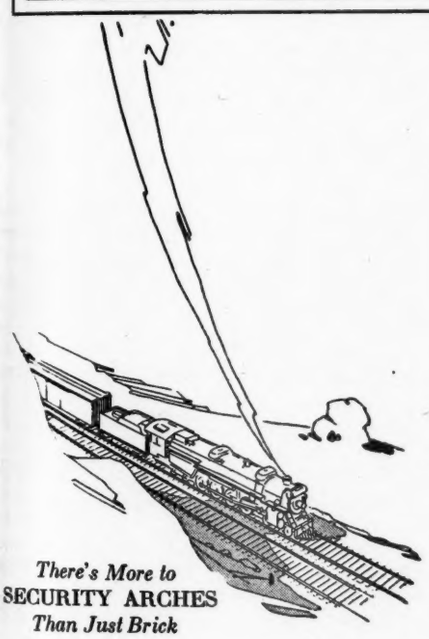
with Security Sectional Arches

Today, more than ever, fuel is one of our strategic materials. Making every pound of fuel produce the maximum amount of steam not only conserves this strategic material but also the cars required to transport it.

For over 32 years, Security Sectional Arches have been saving fuel on all types of steam locomotives.

But experience has proved that only with a *complete* Arch can maximum fuel economy be realized.

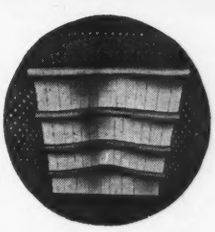




There's More to
SECURITY ARCHES
Than Just Brick

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

and in 1897 he entered the employ of the Schoen Pressed Steel Company, the first manufacturers of fabricated steel freight cars. This firm was merged with the Pressed Steel Car Company in 1898 and in 1915 Mr. Postlethwaite became general

Clarence E. Postlethwaite

sales manager of the latter company. He was appointed assistant vice-president in 1929 and the following year retired from active service.

Edward E. Barrett, president of the Roberts & Schaefer Company, Chicago, from 1926 until he resigned in January, 1937, died at Boca Raton, Fla., on April 21. Mr. Barrett was 72 years old and had been in ill health for several months due to a heart ailment.

Abandonments

TORONTO, HAMILTON & BUFFALO.—Abandonment of car ferry operations between Ashtabula, Ohio, and Port Maitland, Ont., which were suspended in 1932, has been authorized by Division 4 of the Interstate Commerce Commission upon application of the Toronto, Hamilton & Buffalo Navigation Company, the stock of which is held by the railroads controlling this company.

NEW YORK CENTRAL.—The Interstate Commerce Commission, by Commissioner Porter, has extended to May 29 the effective date of its Division 4 order authorizing this company to abandon its 3.1-mile branch from Van Cortlandt Park Junction, New York City, to Getty Square, Yonkers, N. Y., upon petition for reconsideration and rehearing.

UNION PACIFIC.—Division 4 of the Interstate Commerce Commission has authorized this company to abandon part of a branch line from Galeton, Colo., to Purcell, 8.85 miles, but has denied its application for authority to abandon part of a branch line from Barnesville, Colo., to Briggsdale, 13.42 miles, without prejudice to a renewal of the application if certain suggested operating economies prove inadequate to offset losses.

Financial

AKRON, CANTON & YOUNGSTOWN.—*Annual Report.*—The 1942 yearly report of this road and its subsidiary, the Northern Ohio, shows net income, after interest and other charges, of $272,656, as compared with net income of $329,784 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Miles of Road Operated	171.31	.....
RAILWAY OPERATING REVENUES	$3,473,417	+$356,211
Maintenance of way and structures	636,892	+161,926
Maintenance of equipment	354,221	+58,405
Transportation	988,206	+111,089
TOTAL OPERATING EXPENSES	2,305,707	+361,733
Operating ratio	66.38	+4.02
NET REVENUE FROM OPERATIONS	1,167,710	−5,523
Railway tax accruals	353,098	+46,949
NET RAILWAY OPERATING INCOME	644,810	−12,358
TOTAL INCOME	699,295	−36,286
Rent for leased equipments	52,886	+18,658
Interest on funded debt	329,925	−1,178
TOTAL DEDUCTIONS FROM TOTAL INCOME	426,640	+20,843
NET INCOME	$272,656	−$57,129

ANN ARBOR.—*New Directors.*—Calvin P. Bentley, president and general manager of the Owosso Manufacturing Company, Owosso, Mich., and Walter F. Rockwell, president of the Timken-Detroit Axle Company, have been elected to the board of directors of this road.

ATLANTA & ST. ANDREWS BAY.—*Promissory Notes.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue $500,000 of 2¼ per cent promissory notes, to mature in two years, in evidence of a bank loan of that amount to be used, together with treasury funds, to purchase rail and track material sufficient to relay approximately 82 miles of track with new 90-pound rail.

ANN ARBOR.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $553,022, as compared with a net income of $244,951 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	293.86	.....
RAILWAY OPERATING REVENUES	$5,144,153	+$381,431
Maintenance of way and structures	504,619	+85,007
Maintenance of equipment	911,015	+72,080
Transportation—Rail Line	2,075,714	+122,037
TOTAL OPERATING EXPENSES	3,841,431	+303,744
NET REVENUE FROM OPERATIONS	1,302,722	+77,687
Railway tax accruals	563,701	+159,856
RAILWAY OPERATING INCOME	739,022	−82,170
Net Rents—Dr.	139,128	−19,697
NET RAILWAY OPERATING INCOME	599,894	−62,473
Total other income	258,658	+238,710
TOTAL INCOME	858,552	+176,237
Rent for leased roads and equipment	20,047	−2,709
Interest on funded debt—Fixed Interest	280,000	−129,860
TOTAL FIXED CHARGES	300,906	−132,291
NET INCOME	$553,022	+$308,072

CHESAPEAKE & OHIO.—*Annual Meeting.*—The greatly increased volume of traffic, mentioned by the I.C.C. as bearing on its decision to suspend freight rate increases, "may turn out to be a millstone around the neck of the railroads," according to a statement by Carl E. Newton, president of the C. & O. at a stockholders' meeting at Richmond, Va., on April 20. The cost of present heavy traffic "is great in the accelerated wearing out of equipment and roadway," he said. "Shortages of steel and labor make normal maintenance impossible and, although the Commission permits us to set aside reserves for deferred maintenance, the taxing authorities in effect strip those reserves away. To that extent, present reported earnings of most railroads are overstated, and hence, deceptive.

"Therefore, railroad stockholders are making their contribution to the preservation of the wage increases of September, 1941, as well as to the winning of war, in the coin of run-down physical properties resulting from greatly increased traffic volume without due recognition in the tax law." He went on to state that the C. & O.'s net earnings for 1942 were less than they were in four of the six prior years of peace, and added that the I.C.C. decision "can be highly constructive, but only if other governmental policies are shaped consistently with it."

New Directors.—At the annual meeting of this road Cyrus S. Eaton, of Cleveland, Ohio, and Henry J. Guild, of Adams, Mass., were elected members of the board of directors.

CHICAGO & EASTERN ILLINOIS.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $2,035,370, as compared with a net income of $218,966 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	919.99	−4.93
RAILWAY OPERATING REVENUES	$23,964,174	+$5,291,947
Maintenance of way and structures	2,342,796	+264,039
Maintenance of equipment	3,875,525	+577,222
Transportation—rail line	7,940,259	+1,132,081
TOTAL OPERATING EXPENSES	15,864,501	+2,151,522
Operating ratio	66.20	−7.24
NET REVENUE FROM OPERATIONS	8,099,674	+3,140,426
Railway tax accruals	2,633,200	+1,150,200
RAILWAY OPERATING INCOME	5,466,474	+1,990,226

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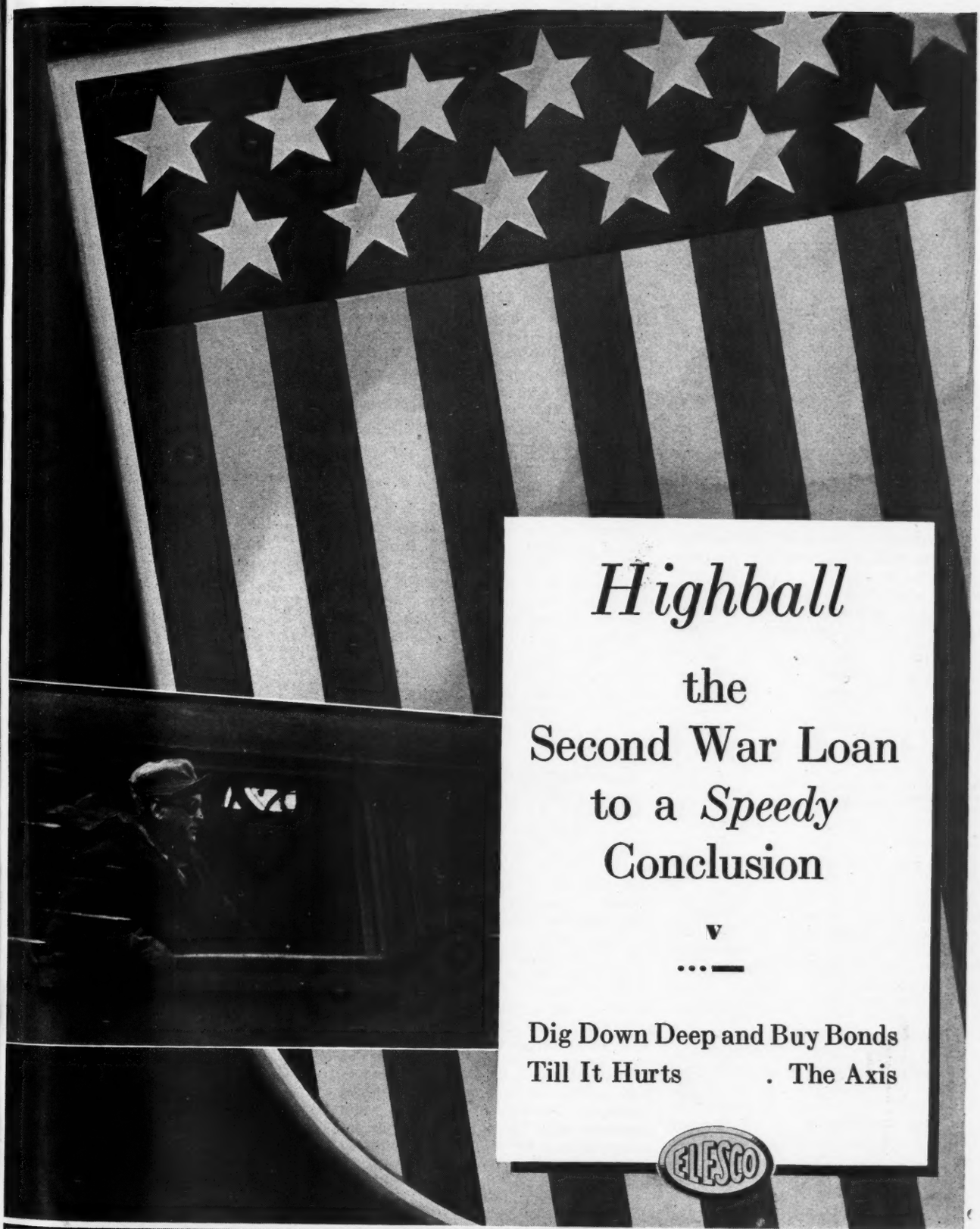

THE SUPERHEATER COMPANY

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Equipment rents—Net Dr.	975,263	+115,850
Joint facility rents—Net Dr.	703,279	+19,986
NET RAILWAY OPERATING INCOME	3,787,932	+1,854,390
Total other income	284,471	+4,169
TOTAL INCOME	4,072,403	+1,858,559
Rent for leased roads and equipment	197,930	+1,596
Interest on funded debt	462,322	−8,887
TOTAL FIXED CHARGES	666,624	−16,184
NET INCOME	$2,035,370	+$1,816,404

CHICAGO, BURLINGTON & QUINCY.—*Burlington Transportation Co. Notes.*—This road's subsidiary, the Burlington Transportation Company, has applied to the Interstate Commerce Commission for authority to issue 6 promissory notes in the aggregate amount of $374,087 in evidence of outstanding conditional sales contracts for equipment purchased. The notes, bearing interest at the rate of 2 per cent per annum, will mature at various times up to May 29, 1945, and are to be issued to meet excess profits tax provisions.

CHICAGO GREAT WESTERN.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $2,617,491, as compared with a net income of $1,838,105 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	1,501.70	.....
RAILWAY OPERATING REVENUES	$25,465,654	+$3,958,722
Maintenance of way and structures	2,997,678	+648,424
Maintenance of equipment	3,234,540	+404.575
Transportation	8,586,283	+1,113,514
TOTAL OPERATING EXPENSES	16,310,063	+2,219,537
Operating ratio	64.05	−1.47
NET REVENUE FROM OPERATIONS	9,155,591	+1,739,185
Railway tax accruals	3,284,222	+1,233,535
RAILWAY OPERATING INCOME	5,871,370	+505,650
Net Rents—Dr.	2,168,825	−278,217
NET RAILWAY OPERATING INCOME	3,702,544	+783,867
Total Other income	99,992	−11,643
TOTAL INCOME	3,802,536	+772,224
Rent for leased roads and equipment	103,833	−8,702
Interest on funded debt—Fixed Interest	722,547	+907
TOTAL FIXED CHARGES	844,069	−2,278
NET INCOME	2,617,491	+779,386
Disposition of net income: Income applied to sinking and other reserve funds	110,935	.....
Income appropriated for investment in physical property	636,641	+98,968
Total appropriations of income	747,576	+98,968
Income balance transferred to profit and loss	$1,869,915	+$680,418

CHICAGO, ROCK ISLAND & PACIFIC.—*New Co-Trustee.*—Aaron Colnon, president of the realty firm of John E. Colnon & Co., Chicago, has been appointed a trustee of the Chicago, Rock Island & Pacific by Federal Judge Michael L. Igoe, succeeding Frank O. Lowden, deceased.

GREAT NORTHERN.—*Purchase of Spokane, Coeur d'Alene & Palouse.*—Division 4 of the Interstate Commerce Commission has authorized this company to acquire by purchase the property of its wholly-owned subsidiary, the Spokane, Coeur d'Alene & Palouse, and to write off as a loss the unpaid balance of advances remaining after liquidation, about $1,682,469.

GREAT NORTHERN.—*Debt Reduction Program.*—This company's outlays for reduction of long term debt in 1942 included $21,149,900 for purchase of its Series G and H general mortgage 4 per cent gold bonds due in 1946 and $5,120,828 for other debt retirement, it has informed the Interstate Commerce Commission, and in 1943 it proposes to purchase at least $16,000,000 of the Series G and H bonds in addition to making other payments on long term debt in excess of $5,000,000.

GREAT NORTHERN.—*Promissory Note.*—This company has applied to the Interstate Commerce Commission for authority to issue a promissory note for $1,265,680 in evidence of indebtedness of that amount to be incurred in the purchase under conditional sales contracts of 500 75-ton ore cars from the General American Transportation Corporation at a total cost of $1,582,100. This indebtedness is to be paid in 90 monthly installments, and the manufacturer's rights are to be offered for sale by competitive bidding which is expected to result in interest costs of not more than 2 per cent.

GREAT NORTHERN.—*Trackage Rights.*—This company has applied to the Interstate Commerce Commission for authority to operate under trackage rights over the Point Defiance line of the Northern Pacific between Tacoma, Wash., and Tenino Junction, 43.5 miles, as part of a joint operation between Vancouver, Wash., and Seattle. Since 1909 this company has operated under trackage rights over the so-called Prairie line of the N.P. between Tacoma and Tenino Junction, but the proposed arrangement will afford it an alternate route with better operating conditions. Subject to certain adjustments, $86,000 additional annual rental charges will be incurred.

GULF, MOBILE & OHIO.—*Promissory Notes.*—This company has applied to the Interstate Commerce Commission for authority to issue five promissory notes aggregating about $680,060 in evidence of, but not in payment for, unpaid principal on equipment contracts to comply with provisions of federal tax laws.

KENTUCKY & INDIANA TERMINAL.—*Extension of Loan.*—Division 4 of the Interstate Commerce Commission has authorized this company to extend to December 31, 1944, its pledge of $511,000 first mortgage 4½ per cent gold bonds as collateral security for notes issued.

LOUISIANA & ARKANSAS.—*Promissory Notes.*—This company has applied to the Interstate Commerce Commission for authority to issue promissory notes for $805,583 in evidence of, but not in payment for, unpaid principal on equipment contracts to comply with provisions of the federal tax laws.

MISSOURI PACIFIC.—*Gulf Coast Lines Trackage Rights.*—Division 4 of the Interstate Commerce Commission has approved the trackage rights agreement, effective as of January 1, 1937, for a term of 15 years, under which this road's subsidiaries, the New Orleans, Texas & Mexico and Beaumont, Sour Lake & Western, operate over the line of the Kansas City Southern from De Quincy, La., to Beaumont, Tex.

PEORIA & PEKIN UNION.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $179,742, as compared with a net income of $104,996 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
RAILWAY OPERATING REVENUES	$1,575,525	+$212,930
Maintenance of way and structures	132,171	+3,866
Maintenance of equipment	174,988	+4,983
Transportation	787,595	+107,974
TOTAL OPERATING EXPENSES	1,223,718	+125,461
NET REVENUE FROM OPERATIONS	351,806	+87,469
Railway tax accruals	244,815	+78,097
RAILWAY OPERATING INCOME	106,992	+9,372
Net Rents—Cr.	216,705	+59,113
NET RAILWAY OPERATING INCOME	323,697	+68,485
Other income	13,323	−1,176
TOTAL INCOME	337,020	+67,309
Rent for leased roads and equipment	750	.....
Interest on funded debt—(a) Fixed Interest	151,802	−7,504
TOTAL FIXED CHARGES	155,511	−7,676
NET INCOME		
BALANCE TRANSFERRED TO PROFIT AND LOSS	$179,742	+$74,746

SOUTHERN PACIFIC.—*New Director.*—Jackson E. Reynolds has resigned as a member of the board of directors of this road and Landon K. Thorne, of New York, has been elected to succed him.

WABASH.—*New Director.*—At a meeting of the board of directors of this road, Charles Belknap, president of the Monsanto Chemical Company, was elected a director.

Average Prices Stocks and Bonds

	Apr. 20	Last week	Last year
Average price of 20 representative railway stocks..	36.47	34.96	24.71
Average price of 20 representative railway bonds..	76.23	74.64	67.04

Dividends Declared

Lake Superior & Ishpeming.—Irregular, 50c, payable April 6 to holders of record March 30.

Nashua & Lowell.—$2.50, semi-annually, payable May 1 to holders of record April 15.

Ontario & Quebec.—Common, $3.00, semi-annually; 5 Per Cent Perpetual Debenture, 2½ Per Cent; both payable June 1 to holders of record May 1.

Railway Officers

EXECUTIVE

Herbert S. Johnson whose promotion to assistant to the vice-president in charge of operations of the Detroit, Toledo &

Herbert S. Johnson

Ironton, with headquarters at Dearborn, Mich., was reported in the *Railway Age* of April 10, was born at Lafayette, Ind., on May 13, 1899. He entered railway service on May 16, 1916, as a clerk of the operating department of the Chicago, Indianapolis & Louisville at Lafayette, subsequently holding several clerical positions until October 4, 1918, when he became a claim investigator of the Grand Trunk Western, with headquarters at Detroit, Mich. In 1919 Mr. Johnson became a clerk of the purchasing department of the Pere Marquette at Detroit, and on February 9, 1920, he was appointed traveling claim adjuster of the D. T. & I. On July 10, 1922, he was promoted to general claim agent, with the same headquarters, holding that position until his new appointment, effective April 1.

Donald H. Smith, general traffic manager of the General American Transportation Corporation, has been elected vice-president in charge of traffic, with headquarters as before at Chicago.

FINANCIAL AND ACCOUNTING

Charles G. Webb, freight claim agent of the Southern Pacific Lines in Texas and Louisiana, has been promoted to general freight claim agent, with headquarters at Houston, Tex., succeeding **Herman M. Moors,** whose death on January 14, was reported in the *Railway Age* of January 23.

Carroll Lee Cole, assistant auditor of freight traffic of the Baltimore & Ohio has been appointed auditor of freight traffic, with headquarters as before at Baltimore, Md., succeeding **William E. Rittenhouse,** who has retired because of ill health, after 47 years of service. **Charles M. McNinch,** chief clerk, has been appointed assistant auditor of freight traffic at Baltimore, succeeding Mr. Cole.

OPERATING

Elmer C. Axline, trainmaster of the Missouri Pacific, with headquarters at Bush, Ill., has retired owing to ill health, after 47 years railroad service.

H. C. Bradford, chief clerk to the superintendent of the Atlanta Joint terminals of the Louisville & Nashville, has been promoted to assistant superintendent, with headquarters as before at Atlanta, Ga.

Morton A. Thomas, whose appointment as superintendent of the Portland division of the Maine Central, with headquarters at Portland, Me., was announced in the *Railway Age* of April 17, was born on August 4, 1888, at Waterville, Vt. After attending Montpelier Seminary and Syracuse university, Mr. Thomas entered railroad service on November 1, 1910, as a telegrapher operator of the Boston & Maine. He subsequently served that road successively as agent, train dispatcher, general agent and trainmaster. In 1938 he became superintendent of the Montpelier & Wells River and the St. Johnsbury & Lake Champlain,

Morton A. Thomas

and in 1939 he resigned to become superintendent of the Eastern division of the Maine Central at Bangor, Me. In September, 1942, he left the service of the Maine Central to return to Vermont, where he has been serving as vice-president and general manager of the St. Johnsbury & Lake Champlain and the Montpelier & Wells River at Montpelier. Mr. Thomas' appointment as superintendent of the Portland division of the Maine Central is effective May 1.

Charles W. Schwarz, whose appointment as superintendent of the Lehigh and Susquehanna division of the Central of New Jersey, with headquarters at Mauch Chunk, Pa., was announced in the *Railway Age* of April 10, was born on April 5, 1899, at Newark, N. J. Mr. Schwarz entered railroad service on April 1, 1916, as an employee of the Central of New Jersey, at Newark. Remaining at Newark, he subsequently served as a messenger in the office of the general agent; car record clerk; assistant yard clerk; yard clerk; night chief yard clerk and extra yardmaster, and yardmaster, and on September 22, 1931, was promoted to general yardmaster. On April 1, 1935, he was transferred to the larger yard at Elizabethport, N. J., and on January 1, 1936, became terminal trainmaster at Allentown, Pa. He was advanced to supervisor of yards and terminals, with

Charles W. Schwarz

headquarters at Jersey City, N. J., on August 16, 1937, and on March 16, 1940, he became freight trainmaster of the Central division of the Central of New Jersey, and of the Mt. Hope Mineral and the Wharton & Northern. Mr. Schwarz was promoted to assistant superintendent of the same roads on July 29, 1941, and remained in that position until his recent appointment as division superintendent at Mauch Chunk.

V. M. Petterson, assistant superintendent of the Sacramento division of the Southern Pacific, at Sacramento, Cal., has been promoted to assistant to the general manager, with headquarters at San Francisco, Cal. **T. F. Custer,** assistant superintendent of the Shasta division, has been transferred to Sacramento, succeeding Mr. Petterson, and **S. L. Dolan,** assistant superintendent of transportation, with headquarters at San Francisco, has been appointed assistant superintendent of the Shasta division, succeeding Mr. Custer.

Edward J. Gibbons, whose promotion to superintendent of the Cleveland division of the New York Central, with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of April 10, was born at Greenville, Pa., on November 8, 1896, and entered railway service on September 13, 1913, as a stenographer of the Lake Shore & Michigan Southern (now part of the New York Central), at Youngstown, Ohio. In 1914 he was appointed accountant at Youngstown, subsequently serving as timekeeper, chief timekeeper and car distributor with the same headquarters. In 1922 Mr. Gibbons was appointed a yard clerk at the Youngstown yard and on June 1, 1923, he was promoted to yardmaster. In 1927 he was advanced to chief supervisor of car service at Cleveland, and one year later he was promoted to general yardmaster, with the same headquarters. He served as

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APRIL 10th

★ WAS M-7 DAY ★ ★ ★

Schenectady celebrated the completion, one year ago, of the "tank killer" that helped turn the tide at El Alamein.

It was built without a blueprint. It was asked for in three months—and completed in less than three weeks. It was a military secret exposed to constant public view — yet when it appeared at El Alamein it was a complete surprise to the enemy.

Rommel had never seen anything like it before —and probably never wants to see anything like it again. For this strange hybrid monster—a combination of 105 mm. howitzer and M-3 tank—expertly handled by the men of the British Eighth Army, left 500 Nazi tanks in wreckage and flames and helped start the so-called "Desert Fox" on his way back to Berlin.

One year ago it rolled off the assembly lines in Schenectady. It was then called, technically, the M-7. In its baptism of fire, it was given the much more descriptive name of "tank killer".

The men and women who were in on its birth had a rough idea of its importance. But they never realized that this deadly product of their skill and effort would play so vital a part in one of the most decisive battles of history—a battle, the successful outcome of which enables us of the United Nations to speak with hope today of the post-war world. Before El Alamein, no one dared think in those terms.

On April 10th we celebrated the appearance of the first M-7, in humble gratitude that we in Schenectady could contribute to a decisive victory thousands of miles away and so heighten the hopes of freedom-loving people everywhere.

To the following goes full credit for the amazing job the M-7 has done . . .

1 To its designers and engineers for their Yankee courage and ingenuity in building the M-7 in record time.

2 To the 10,000 men and women at the Schenectady plant who pitched in to turn the M-7 out in sufficient numbers to turn Rommel.

3 To the populace of Schenectady—who saw the M-7s rumbling through the streets—and kept their lips discreetly buttoned.

4 To the American railroads for the splendid job they did of getting every M-7 to its point of embarkation.

5 To the United States Navy for transporting these tank killers across thousands of miles of water and delivering them safely.

6 To the heroic men of the British Eighth Army whose expert use of the M-7 finally blasted Rommel's hopes of getting through to Suez.

7 And to the hundreds of sub-contractors and suppliers, and others, for their unflagging cooperation in the building of this mighty weapon of war.

★

AMERICAN LOCOMOTIVE

MANUFACTURERS OF MOBILE POWER

STEAM, DIESEL AND ELECTRIC LOCOMOTIVES, MARINE DIESELS, TANKS, GUN CARRIAGES & OTHER ORDNANCE

trainmaster from March 1, 1938, to June 1, 1940, and on the latter date he was advanced to assistant superintendent, holding that position until his new appointment, effective April 1.

ENGINEERING & SIGNALING

Wilmer Welsh, office engineer of the New York Central, has been appointed assistant signal engineer of the Baltimore & Ohio, with headquarters at Baltimore, Md.

Philip M. Stutrud, assistant chief engineer of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn., has resigned, effective April 1, to enter another field.

Foster H. Simpson, whose promotion to assistant chief engineer of the New York Central system (including the Big Four and the Michigan Central) West of Buffalo, N. Y., with headquarters at Chicago, was reported in the *Railway Age* of April 10, was born at Fulton, N. Y., on January 18, 1893, and graduated in civil engineering from the Rensselaer Polytechnic Institute in 1915. He entered railway service in that year as a rodman of the

Foster H. Simpson

N. Y. C., at Poughkeepsie, N. Y., and from November, 1917, to July, 1919, he served in France with the U. S. Army. In August, 1919, Mr. Simpson returned to the New York Central as assistant resident engineer, with headquarters at New York, and one year later he was transferred to the New York Terminal district. In April, 1937, he was advanced to assistant engineer, with the same headquarters, and two years later he was promoted to assistant district engineer at Detroit, Mich. In October, 1942, Mr. Simpson was transferred to Cleveland, Ohio, remaining in that location until his new appointment, effective April 1.

Frank J. Jerome, whose promotion to chief engineer of the New York Central system (including the Big Four and the Michigan Central) West of Buffalo, N. Y., with headquarters at Chicago, was reported in the *Railway Age* of April 10, was born at Painesville, Ohio, on May 26, 1890, and graduated from Williams College in 1911, and from Massachusetts Institute of Technology in 1914. He entered railway service with the New York Central on July 6, 1914, as a transitman at Elyria, Ohio, and in March of the following year he was transferred to Toledo, Ohio. In 1917, he was appointed assistant engineer at Chicago, and on August 20, 1923, he was promoted to trainmaster at that point. Mr. Jerome was appointed division engineer,

Frank J. Jerome

with headquarters at Chicago, on November 1, 1927, and in April, 1938, he was promoted to engineer maintenance of way of the Michigan Central, with headquarters at Detroit, Mich. On October 1, 1939, he was advanced to assistant chief engineer of the New York Central system, (including the Michigan Central) with headquarters at Chicago. One year later his jurisdiction was extended to include the Big Four and the Peoria & Eastern (also controlled by the N. Y. C.). He held that position until his new appointment, effective April 1.

Clifford H. Sandberg has been appointed assistant bridge engineer, system, of the Atchison, Topeka & Santa Fe at Chicago. Mr. Sandberg's name was incorrectly reported as Charles H. Sandberg in the *Railway Age* of April 3.

G. H. Fair, assistant division engineer of the Southern Pacific at Portland, Ore., has been promoted to division engineer of the Tucson division, with headquarters at Tucson, Ariz., succeeding **T. W. Saul,** who has been transferred to the Sacramento division, with headquarters at Sacramento, Cal., replacing **W. F. Turner,** who has entered military service.

TRAFFIC

H. J. Birmingham, assistant traffic manager of the General American Transportation Corporation, has been promoted to traffic manager, with headquarters as before at Chicago.

T. M. Shalloe, assistant general freight agent of the New York Central at Albany, N. Y., has been transferred to New York, succeeding **F. J. Hahn,** who has resigned. **G. H. Ingalls,** assistant general Eastern freight agent at New York, has been appointed assistant general freight agent at Albany, succeeding Mr. Shalloe, and **E. D. Snow, Jr.,** industrial agent, has been appointed assistant general Eastern freight agent, with headquarters as before at New York, succeeding Mr. Ingalls, while **W. J. Marshall** has been appointed industrial agent at New York, succeeding Mr. Snow. **W. R. Dallow,** in addition to his duties as assistant general freight agent at New York, now has jurisdiction over industrial development.

C. M. Cox, general agent of the Louisville & Nashville at Detroit, Mich., has been promoted to division freight agent, with headquarters at Nashville, Tenn. **R. H. Wilson** has been appointed general agent at Detroit, succeeding Mr. Cox.

R. W. Hart, chief clerk of the freight traffic manager of the New York Central at Cleveland, Ohio, has been promoted to assistant general freight agent, with the same headquarters, succeeding **M. S. O'Connor,** who has retired.

Piersol W. Jacks, district freight agent of the Southern, has been promoted to assistant general freight agent, with headquarters as before at New Orleans, La., succeeding **B. A. Treuting,** who died recently. **Thomas J. Garner,** assistant general freight agent at New Orleans, has been appointed foreign freight agent, a change of title.

Arthur W. Richardson, who resigned as general freight agent of the Wabash in 1941 to become a member of the Central Freight Association Auxiliary Committee, has returned to the Wabash as freight traffic manager, with headquarters at St. Louis, Mo., succeeding **Charles J. Sayles,** whose promotion to general freight traffic manager was reported in the *Railway Age* of March 27.

OBITUARY

Robert Lee Nutt, who retired as chairman of the board of the Seaboard Air Line in 1929, died on April 18, at Sebring, Fla., at the age of 70. Entering the service of the Seaboard Air Line as a clerk in 1892, Mr. Nutt subsequently served as vice-president, secretary and treasurer, and was elected chairman of the board in 1927.

William G. Crush, formerly assistant to the vice-president in charge of traffic of the Missouri-Kansas-Texas, who retired in 1940 as special traffic representative, died on April 12 at his home in Dallas, Tex. Mr. Crush was born at Louisville, Ky., in 1866, and attended St. Xavier college, Louisville. He entered railway service as a clerk in the auditor's office of the Louisville, Albany & Chicago (now the Chicago, Indianapolis & Louisville) and later served in several other capacities on that road. In 1893 Mr. Crush became general passenger agent of the M-K-T, and in 1914 he was advanced to passenger traffic manager, with headquarters at Dallas. On October 1, 1930, he was promoted to assistant to the vice-president in charge of traffic, and a short time later he was appointed to the position he held at the time of his retirement.